

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
Below 9 (Not Allocated)  444 445			Below 9	(Not Allocated)  444 445	(Not Allocated)  444 445	
9-14  RADIONAVIGATION			9-14	RADIONAV- IGATION  US18 US294	RADIONAVIG ATION  US18 US294	
14-19.95  FIXED MARITIME MOBILE 448  446 447			14-19.95	FIXED MARITIME MOBILE  US294 448	Fixed  US294 448	
19.95-20.05  STANDARD FREQUENCY AND TIME SIGNAL (20 kHz)			19.95-20.05	STANDARD FREQUENCY AND TIME SIGNAL (20 kHz)  US294	STANDARD FREQUENCY AND TIME SIGNAL (20 kHz)  US294	FCC Rules and Regulations make no provi- sions for the li- censing of standard fre- quency stations.

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Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
20.05-70  FIXED MARITIME MOBILE 448  447 449			20.05-59	FIXED MARITIME MOBILE  US294 448	FIXED  US294 448	
			59-61	STANDARD FREQUENCY AND TIME SIGNAL (60 kHz)  US294	STANDARD FREQUENCY AND TIME SIGNAL (60 kHz)  US294	FCC Rules and Regulations make no provi- sions for the li- censing of standard fre- quency stations.
			61-70	FIXED MARITIME MOBILE  US294 448	FIXED  US294 448	

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INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
70-72 RADIONAVIG ATION 451	70-90 FIXED MARITIME MOBILE 448 MARITIME  RADIONAVIG ATION 451 Radiolocation  452	70-72 RADIONAVIG ATION 451 Fixed Maritime Mobile 448  450	70-90	FIXED MARITIME MOBILE Radiolocation  US294 448 451	FIXED Radiolocation  US294 448 451	
72-84 FIXED MARITIME MOBILE 448 RADIONAVIG ATION 451  447		72-84 FIXED MARITIME MOBILE 448 RADIONAVIG ATION 451				

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Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
84-86 RADIONAVIGATION 451		84-86 RADIONAVIGATION 451 Fixed Maritime Mobile 448  450				
86-90 FIXED MARITIME MOBILE 448 RADIONAVIGATION  447		86-90 FIXED MARITIME MOBILE 448 RADIONAVIGATION 451				
90-110  RADIONAVIGATION 453 Fixed  453A 454			90-110	RADIONAVIGATION  US18 US104 US294 453	RADIONAVIGATION  US18 US104 US294 453	

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Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
110-112 FIXED MARITIME MOBILE RADIONAVIG ATION  454	110-130 FIXED MARITIME MOBILE MARITIME  RADIONAVIG ATION 451 Radiolocation  452 454	110-112 FIXED MARITIME MOBILE RADIONAVIG ATION 451  454	110-130	FIXED MARITIME MOBILE Radiolocation  US294 451 454	FIXED MARITIME MOBILE Radiolocation  US294 451 454	
112-115 RADIONAVIG ATION 451		112-117.6 RADIONAVIG ATION 451 Fixed Maritime Mobile  454 455				
115-117.6 RADIONAVIG ATION 451 Fixed Maritime Mobile  454 456						

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Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
117.6-126 FIXED MARITIME MOBILE RADIONAVIG ATION 451  454		117.6-126 FIXED MARITIME MOBILE RADIONAVIG ATION 451  454				
126-129 RADIONAVIG ATION 451		126-129 RADIONAVIG ATION 451 Fixed Maritime Mobile  454 455				
129-130 FIXED MARITIME MOBILE RADIONAVIG ATION 451  454		129-130 FIXED MARITIME MOBILE RADIONAVIG ATION 451  454				

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INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
130-148.5 MARITIME MOBILE /FIXED/ 454 457	130-160 FIXED  MARITIME MOBILE  454	130-160 FIXED MARITIME MOBILE RADIONAVIG ATION  454	130-160	FIXED MARITIME MOBILE  US294 454	FIXED MARITIME MOBILE  US294 454	
148.5-255 BROADCASTI NG  460 461 462						
	160-190 FIXED  459	160-190 FIXED Aeronautical  Radionavigatio n	160-190	FIXED MARITIME MOBILE  US294 459	FIXED  US294 459	
	190-200 AERONAUTICAL RADIONAVIGATION		190-200	AERONAUTI- CAL RADIONA- VIGATION  US18 US226 US294	AERONAUTIC AL  RADIONAVIG ATION  US18 US226 US294	

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INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
	200-275 AERONAUTIC AL	200-285 AERONAUTIC AL	200-275	AERONAU- TICAL RADIONA- VIGATION Aeronautical Mobile	AERONAUTIC AL  RADIONAVIG ATION Aeronautical Mobile	
255-283.5 BROADCASTI NG /AERONAUTIC AL	RADIONAVIG ATION Aeronautical Mobile	RADIONAVIG ATION Aeronautical Mobile		US18 US294	US18 US294	
RADIONAVIG ATION/463  462 464	275-285 AERONAUTIC AL  RADIONAVIG ATION Aeronautical Mobile Maritime  Radionavigatio n (radiobeacons)		275-285	AERONAU- TICAL RADIONA- VIGATION Aeronautical Mobile Maritime Radiona- vigation (radiobeacons)	AERONAU- TICAL RADIONA- VIGATION Aeronautical Mobile Maritime Radiona- vigation (radiobeacons)	
				US18 US294	US18 US294	



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Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
283.5-315 MARITIME  RADIONAVIGATION (radiobeacons) 466 /AERONAUTICAL  RADIONAVIGATION/ 465 466A						
	285-315 MARITIME RADIONAVIGATION (radiobeacons) 466 /AERONAUTICAL RADIONAVIGATION/		285-325	MARITIME RADIONAVIGATION (radiobeacons) Aeronautical Radionavigation	MARITIME RADIONAVIGATION (radiobeacons) Aeronautical Radionavigation	

(Radiobeacons )  
US18 US294  
G121 466

(Radiobeacons)  
US18 US294  
466

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INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
315-325 AERONAUTIC AL  RADIONAVIG ATION Maritime  Radionavigatio n (radiobeacons) 466  465 467	315-325 MARITIME  RADIONAVIG ATION (radiobeacons) 466 Aeronautical  Radionavigatio n	315-325 AERONAUTIC AL  RADIONAVIG ATION MARITIME  RADIONAVIG ATION (radiobeacons) 466				

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INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
325-405 AERONAUTIC AL  RADIONAVIG ATION  465	325-335 AERONAUTIC AL  RADIONAVIG ATION Aeronautical Mobile Maritime  Radionavigatio n (radiobeacons)	325-405 AERONAUTIC AL  RADIONAVIG ATION Aeronautical Mobile	325-335	AERONAU- TICAL RADIONA- VIGATION (radiobeacons) Aeronautical Mobile Maritime Radiona- vigation (radiobeacons)  US18 US294	AERONAU- TICAL RADIONA- VIGATION (radiobeacons) Aeronautical Mobile Maritime Radiona- vigation (radiobeacons)  US18 US294	
	335-405 AERONAUTIC AL  RADIONAVIG ATION Aeronautical Mobile		335-405	AERONAU- TICAL RADIONA- VIGATION (radiobeacons) Aeronautical Mobile  US18 US294	AERONAU- TICAL RADIONA- VIGATION (radiobeacons) Aeronautical Mobile  US18 US294	

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INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
405-415 RADIONAVIGATION 468  465	405-415 RADIONAVIGATION 468 Aeronautical Mobile		405-415	RADIONAVIGATION Aeronautical Mobile  US18 US294 468	RADIONAVIGATION Aeronautical Mobile  US18 US294 468	
415-435 AERONAUTICAL  RADIONAVIGATION /MARITIME MOBILE/470  465	415-495 MARITIME MOBILE 470 Aeronautical Radionavigation 470A  469 469A 471 472A		415-435	AERONAUTICAL  RADIONAVIGATION MARITIME MOBILE  US294 469A 470	AERONAUTICAL  RADIONAVIGATION MARITIME MOBILE  US294 469A 470	

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INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
435-495 MARITIME MOBILE 470 Aeronautical  Radionavigation  465 471 472A			435-495	MARITIME MOBILE Aeronautical Radionavigation  US231 US294 470 471 472A	MARITIME MOBILE  US231 US294 470 471 472A	The frequency 480 kHz is available to low power Government Coast stations for the calibration of ship direction finders on the condition that harmful inter- ference is not caused to the maritime mobile service.
495-505  MOBILE (distress and calling)  472			495-505	MOBILE (distress and calling)  472	MOBILE (distress and calling)  472	500 kHz distress and calling

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INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
505-526.5 MARITIME MOBILE 470 /AERONAUTIC AL  RADIONAVIG ATION/  465 471 474 476	505-510 MARITIME MOBILE 470 471	505-526.5 MARITIME MOBILE 470 474 /AERONAUTIC AL	505-510	MARITIME MOBILE  470 471	MARITIME MOBILE  470 471	
	510-525 MOBILE 474 AERONAUTIC AL  RADIONAVIG ATION	RADIONAVIG ATION/ Aeronautical Mobile Land Mobile  471	510-525	AERONAU- TICAL RADIONA- VIGATION (radiobeacons) MARITIME MOBILE (Ships Only)  US14 US18 US225 474	AERONAU- TICAL RADIONA- VIGATION (radiobeacons) MARITIME MOBILE (Ships Only)  US14 US18 US225 474	518 kHz is used for international NAVTEX in the maritime mobile service.

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Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
	525-535 BROADCASTI NG 477 AERONAUTIC AL		525-535	AERONAU- TICAL RADIONA- VIGATION (radiobeacons) MOBILE	AERONAU- TICAL RADIONA- VIGATION (radiobeacons) MOBILE	530 kHz Travelers Information Service
526.5-1606.5 BROADCASTI NG  478	RADIONAVIG ATION	526.5-535 BROADCASTI NG Mobile  479		US18 US221 US239	US18 US221 US239	
	535-1605 BROADCASTI NG	535-1606.5 BROADCASTI NG	535-1605		BROADCASTI NG  NG128	
	1605-1625 BROADCASTI NG 480  480A		1605-1615	MOBILE  US221 480	MOBILE  US221 480	1610 kHz Travelers Information Systems

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INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
1606.5-1625 MARITIME MOBILE 480A /FIXED/ /LAND MOBILE/  483 484		1606.5-1800 FIXED MOBILE RADIOLOCATI ON RADIONAVIG ATION  482				
			1615-1625	US237 US299 480	BROADCASTI NG  US237 US299 480	Broadcasting implementation is subject to decisions of a future Region 2 Administrative Radio Conference.
1625-1635 RADIOLOCATI ON 487  485 486	1625-1705 BROADCASTI NG 480 /FIXED/ /MOBILE/ Radiolocation		1625-1705	Radiolocation  US238 US299 480	BROADCASTI NG Radiolocation  US238 US299 480	

480A



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Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
1635-1800 MARITIME MOBILE 480A /FIXED/ /LAND MOBILE/  483 484 488						
	1705-1800 FIXED MOBILE RADIOLOCATI ON AERONAUTIC AL  RADIONAVIG ATION		1705-1800	FIXED MOBILE RADIOLOC- ATION  US240	FIXED MOBILE RADIOLOCATI ON  US240	

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INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
1800-1810 RADIOLOCATI ON 487  485 486	1800-1850 AMATEUR	1800-2000 AMATEUR FIXED MOBILE except aero- nautical mobile RADIONAVIG ATION Radiolocation  489	1800-1900		AMATEUR	
1810-1850 AMATEUR  490 491 492 493						
1850-2000 FIXED MOBILE except aero- nautical mobile  484 488 495	1850-2000 AMATEUR FIXED MOBILE except aero- nautical mobile RADIOLOCATI ON RADIONAVIG ATION  494		1900-2000	RADIOLOC- ATION  US290	RADIOLOCATI ON  US290	

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INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
2000-2025 FIXED MOBILE except aero- nautical mobile (R)  484 495	2000-2065  FIXED MOBILE		2000-2065	FIXED MOBILE	MARITIME MOBILE  NG19	2003 kHz, intership frequency on the Great Lakes.
2025-2045 FIXED MOBILE except aero- nautical mobile (R) Meteorological Aids 496  484 495						

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INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
2045-2160 MARITIME MOBILE /FIXED/ /LAND MOBILE/  483 484						
	2065-2107 MARITIME MOBILE 497  498		2065--2107	MARITIME MOBILE	MARITIME MOBILE	
			2065-2068.5	Ship and coast (telephony)  497	Ship and coast (telephony)  497	
			2068.5- 2078.5	Ship (Wide- band te- legraphy, facsimile and space transmis- sion systems)  US296	Ship (Wide- band te- legraphy, facsimile and space transmis- sion systems)  US296	
			2078.5- 2089.5	Ship and coast (telephony)  497	Ship and coast (telephony)  497	
			2089.5- 2092.5	Ship (Calling, telegraphy)	Ship (Calling, telegraphy)	

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INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			2092.5-2107	Ship and coast (telephony)  497	Ship and coast (telephony)  497	
	2107-2170 FIXED MOBILE		2107-2170	FIXED MOBILE	FIXED LAND MOBILE MARITIME MOBILE  NG19	
2160-2170 RADIOLOCATI ON 487  485 486 499						
2170-2173.5 MARITIME MOBILE			2170-2173.5	MARITIME MOBILE (Telephony)	MARITIME MOBILE (Telephony)	
2173.5-2190.5 MOBILE (distress and calling)  500 500A 500B 501			2173.5- 2190.5	MOBILE (distress and calling)  US279 500 500A 500B 501	MOBILE (distress and calling)  US279 500 500A 500B 501	2182 kHz Distress and Calling

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INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
2190.5-2194 MARITIME MOBILE			2190.5-2194	MARITIME MOBILE (Telephony)	MARITIME MOBILE (Telephony)	
2194-2300 FIXED MOBILE except aero- nautical mobile (R)  484 495 502	2194-2300 FIXED MOBILE  502		2194-2495	FIXED MOBILE	FIXED LAND MOBILE MARITIME MOBILE  NG19	
2300-2498 FIXED MOBILE except aero- nautical mobile (R) BROADCASTI NG 503  495	2300-2495 FIXED MOBILE BROADCASTING 503					
	2495-2501 STANDARD FREQUENCY AND TIME SIGNAL (2500 kHz)		2495-2505	STANDARD FREQUENCY AND TIME SIGNAL (2500 kHz)	STANDARD FREQUENCY AND TIME SIGNAL (2500 kHz)	FCC Rules and Regulations make no provi- sions for licens- ing of standard

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INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
2498-2501 STANDARD FREQUENCY AND TIME SIGNAL (2500 kHz)						
2501-2502  STANDARD FREQUENCY AND TIME SIGNAL  Space Research						
2502-2625 FIXED MOBILE except aero-  nautical mobile (R)	2502-2505  STANDARD FREQUENCY AND TIME SIGNAL					

484 495 504

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INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
	2505-2850 FIXED MOBILE		2505-2850	FIXED MOBILE	FIXED LAND MOBILE MARITIME MOBILE	2635 kHz and 2638 kHz intership fre- quencies
2625-2650 MARITIME MOBILE MARITIME  RADIONAVIG- ATION  484				US285	US285	2738 kHz intership frequency except in Gulf of Mexico
2650-2850 FIXED MOBILE except aero- nautical mobile (R)  484 495						2830 kHz intership frequency in Gulf of Mexico



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INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
2850-3025 AERONAUTICAL MOBILE (R)  501 505			2850-3025	AERONAU- TICAL MOBILE (R)  US283 501 505	AERONAUTIC AL MOBILE (R)  US283 501 505	
3025-3155 AERONAUTICAL MOBILE (OR)			3025-3155	AERONAU- TICAL MOBILE (OR)	AERONAUTIC AL MOBILE (OR)	Operation in the (OR) bands by Non-Govern- ment stations shall be authorized only by special ar- rangements between the FCC and the IRAC.
3155-3200 FIXED MOBILE except aeronautical mobile (R)  506 507			3155-3230	FIXED MOBILE except aero- nautical mobile (R)	FIXED MOBILE except aero- nautical mobile (R)	

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INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
3200-3230 FIXED MOBILE except aeronautical mobile (R) BROADCASTING 503  506						
3230-3400 FIXED MOBILE except aeronautical mobile BROADCASTING 503  506 508			3230-3400	FIXED MOBILE except aero- nautical mobile Radiolocation	FIXED MOBILE except aero- nautical mobile Radiolocation	
3400-3500  AERONAUTICAL MOBILE (R)			3400-3500	AERONAU- TICAL MOBILE (R)  US283	AERONAUTIC AL MOBILE (R)  US283	

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INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
3500-3800 AMATEUR 510 FIXED MOBILE except aero- nautical mobile  484	3500-3750 AMATEUR 510  509 511	3500-3900 AMATEUR 510 FIXED MOBILE	3500-4000	510	AMATEUR  510	
3800-3900 FIXED AERONAUTIC AL MOBILE (OR) LAND MOBILE	3750-4000 AMATEUR 510 FIXED MOBILE except aero- nautical mobile (R)  511 512 514 515					
3900-3950 AERONAUTIC AL MOBILE (OR)  513						
		3900-3950 AERONAUTIC AL MOBILE BROADCASTI NG				

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INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
3950-4000 FIXED BROADCASTI NG		3950-4000 FIXED BROADCASTI NG  516				
4000-4063  FIXED MARITIME MOBILE 517  516			4000-4063	MARITIME MOBILE  US236	MARITIME MOBILE US236	See Section 4.3.13 for use.
4063-4438  MARITIME MOBILE 500A 500B 520 520A 520B  518 519			4063-4438	MARITIME MOBILE	MARITIME MOBILE	See Annex H for Maritime Mobile channel use.
			4063-4065	Ship stations, oceanographic data transmission	Ship stations, oceanographic data transmission	
			4065-4146  520	Ship stations, telephony, duplex oper- ation  520	Ship stations, telephony, duplex opera- tion  520	

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INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			4146-4152	Ship and coast stations, telephony simplex operation  US82	Ship and coast stations, telephony simplex operation  US82	
			4152-4172	Ship stations, wide-band telegraphy, facsimile and special transmission systems  US296	Ship stations, wide-band telegraphy, facsimile and special transmission systems  US296	

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INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			4172- 4181.75	Ship stations, narrow-band direct-printing telegraphy and data transmis- sion systems (paired frequencies)  500B	Ship stations, narrow-band direct-printing telegraphy and data transmis- sion systems (paired frequencies)  500B	
			4181.75- 4186.75	Ship stations, A1A Morse telegraphy, calling	Ship stations, A1A Morse telegraphy, calling	
			4186.75- 4202.25	Ship stations, A1A Morse telegraphy, working	Ship stations, A1A Morse telegraphy, working	

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INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			4202.25- 4207.25	Ship stations, narrow-band direct-printing telegraphy and A1A Morse te- legraphy, working (non- paired fre- quencies)	Ship stations, narrow-band direct-printing telegraphy and A1A Morse telegraphy, working (non- paired frequencies)	
			4207.25- 4209.25	Ship stations, digital selective call- ing  500A	Ship stations, digital selective calling  500A	
			4209.25- 4219.25	Coast stations, narrow-band direct-printing telegraph data transmission systems (paired frequencies)  520B	Coast stations, narrow-band direct-printing telegraph data transmission systems (paired frequencies)  520B	

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INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			4219.25-4221	Coast stations, digital selective calling	Coast stations, digital selective calling	
			4221-4351	Coast stations, wide-band and A1A Morse telegraphy, facsimile, special and data transmission systems and direct-printing telegraphy systems	Coast stations, wide-band and A1A Morse telegraphy, facsimile, special and data transmission systems and direct-printing telegraphy systems	
			4351-4438	Coast stations, telephony, duplex operation	Coast stations, telephony, duplex operation	



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INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
4438-4650 FIXED MOBILE except aeronautical mobile (R)		4438-4650 FIXED MOBILE except aero- nautical mobile	4438-4650	FIXED MOBILE except aero- nautical mobile (R)	FIXED MOBILE except aero- nautical mobile (R)	
4650-4700 AERONAUTICAL MOBILE (R)			4650-4700	AERONAU- TICAL MOBILE (R)  US282 US283	AERONAU- TICAL MOBILE (R)  US282 US283	
4700-4750 AERONAUTICAL MOBILE (OR)			4700-4750	AERONAU- TICAL MOBILE (OR)	AERONAUTIC AL MOBILE (OR)	Operations in the (OR) bands by Non- Government stations shall be authorized only by special ar- rangements between the FCC and the IRAC.

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INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
4750-4850 FIXED AERONAUTIC AL MOBILE (OR) LAND MOBILE BROADCASTI NG 503	4750-4850 FIXED MOBILE except aero- nautical mobile (R) BROADCASTI NG 503	4750-4850 FIXED BROADCASTI NG 503 Land Mobile	4750-4850	FIXED MOBILE except aero- nautical mobile (R)	FIXED MOBILE except aero- nautical mobile (R)	
4850-4995  FIXED LAND MOBILE BROADCASTING 503			4850-4995	FIXED MOBILE	FIXED	
4995-5003  STANDARD FREQUENCY AND TIME SIGNAL (5000 kHz)			4995-5005	STANDARD FREQUENCY AND TIME SIGNAL (5000 kHz)	STANDARD FREQUENCY AND TIME SIGNAL (5000 kHz)	FCC Rules and Regulations make no provi- sions for the li- censing of standard fre- quency stations.
5003-5005  STANDARD FREQUENCY AND TIME SIGNAL Space Research				G106		
5005-5060  FIXED BROADCASTING 503			5005-5060	FIXED	FIXED	

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INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
5060-5250 FIXED Mobile except aeronautical mobile  521			5060-5450	FIXED Mobile except aero- nautical mobile	FIXED Mobile except aero- nautical mobile	
5250-5450 FIXED MOBILE except aeronautical mobile				US212	US212	
5450-5480 FIXED AERONAUTIC AL MOBILE (OR) LAND MOBILE	5450-5480 AERONAUTIC AL MOBILE (R)	5450-5480 FIXED AERONAUTIC AL MOBILE (OR) LAND MOBILE	5450-5680	AERONAU- TICAL MOBILE (R)	AERONAUTIC AL MOBILE (R)	
5480-5680  AERONAUTICAL MOBILE (R)  501 505				US283 501 505	US283 501 505	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
5680-5730  AERONAUTICAL MOBILE (OR)  501 505			5680-5730	AERONAU- TICAL MOBILE (OR)  501 505	AERONAU- TICAL MOBILE (OR)  501 505	Operation in the (OR) bands by Non-Govern- ment stations shall be authorized only by special ar- rangements between the FCC and the IRAC.
5730-5900 FIXED LAND MOBILE	5730-5900 FIXED MOBILE except aeronautical mobile (R)	5730-5900 FIXED Mobile except aeronautical mobile (R)	5730-5950	FIXED MOBILE except aero- nautical mobile (R)	FIXED MOBILE except aero- nautical mobile (R)	
5900-5950  BROADCASTING 521A 521B 521C						
5950-6200  BROADCASTING			5950-6200	BROAD- CASTING	BROADCASTI NG	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
6200-6525  MARITIME MOBILE 500A 500B 520 520B  522			6200-6525	MARITIME MOBILE	MARITIME MOBILE	See Annex H for Maritime Mobile channel use.
			6200-6224	Ship stations, telephony, duplex opera- tion  520	Ship stations, telephony, duplex opera- tion  520	
			6224-6233	Ship and coast stations, telephony, simplex operation  US82	Ship and coast stations, telephony, simplex operation  US82	
			6233-6261	Ship stations, wide-band telegraphy, facsimile and special transmission systems  US296	Ship stations, wide-band telegraphy, facsimile and special transmission systems  US296	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			6261- 6262.75	Ship stations, oceanographic data transmission	Ship stations, oceanographic data transmission	
			6262.75- 6275.75	Ship stations, narrow-band direct-printing telegraphy and data transmis- sion systems (paired frequencies)  500B	Ship stations, narrow-band direct-printing telegraphy and data transmis- sion systems (paired frequencies)  500B	
			6275.75- 6280.75	Ship stations, A1A Morse telegraphy, calling	Ship stations, A1A Morse telegraphy, calling	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			6280.75- 6284.75	Ship stations, narrow-band direct-printing telegraphy and data transmis- sion systems (paired frequencies)	Ship stations, narrow-band direct-printing telegraphy and data transmis- sion systems (paired frequencies)	
			6284.75- 6300.25	Ship stations, A1A Morse telegraphy, working	Ship stations, A1A Morse telegraphy, working	
			6300.25- 6311.75	Ship stations, narrow-band direct-printing telegraph and A1A Morse te- legraphy, working (non- paired fre- quencies)	Ship stations, narrow-band direct-printing telegraph and A1A Morse telegraphy, working (non- paired frequencies)	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			6311.75- 6313.75	Ship stations, digital selective call- ing  500A	Ship stations, digital selective calling  500A	
			6313.75- 6330.75	Coast stations, narrow-band direct-printing telegraphy and data transmis- sion systems (paired frequencies)  520B	Coast stations, narrow-band direct-printing telegraphy and data transmis- sion systems (paired frequencies)  520B	
			6330.75- 6332.5	Coast stations, digital selective call- ing	Coast stations, digital selective calling	



## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			6332.5-6501	Coast stations, wide-band and A1A Morse telegraphy, facsimile, special and data transmission systems and direct-printing telegraphy systems	Coast stations, wide-band and A1A Morse telegraphy, facsimile, special and data transmission systems and direct-printing telegraphy systems	
			6501-6525	Coast stations, telephony, duplex operation	Coast stations, telephony, duplex operation	
6525-6685 AERONAUTICAL MOBILE (R)			6525-6685	AERONAUTICAL MOBILE (R)  US283	AERONAUTICAL MOBILE (R)  US283	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
6685-6765 AERONAUTICAL MOBILE (OR)			6685-6765	AERONAU- TICAL MOBILE (OR)	AERONAU- TICAL MOBILE (OR)	Operation in the (OR) bands by Non-Govern- ment stations shall be authorized only by special ar- rangement between the FCC and the IRAC.
6765-7000 FIXED Land Mobile 525  524			6765-7000	FIXED Mobile  524	FIXED Mobile  524	ISM 6780 ± 15 kHz
7000-7100 AMATEUR 510 AMATEUR-SATELLITE  526 527			7000-7100	510	AMATEUR AMATEUR- SATELLITE  510	

## TABLES OF FREQUENCY ALLOCATIONS

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
7100-7300 BROADCASTI NG	7100-7300 AMATEUR 510 528	7100-7300 BROADCASTI NG	7100-7300	510 528	AMATEUR 510 528	
7300-7350  BROADCASTING 521A 521B 528A			7300-8100	FIXED Mobile	FIXED Mobile	
7350-8100  FIXED Land Mobile  529						
8100-8195  FIXED MARITIME MOBILE			8100-8195	MARITIME MOBILE  US236	MARITIME MOBILE  US236	See Section 4.3.13 for use.
8195-8815  MARITIME MOBILE 500A 500B 520B 529A  501			8195-8815	MARITIME MOBILE	MARITIME MOBILE	See Annex H for Maritime Mobile channel use.

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			8195-8294	Ship stations, telephony, duplex operation  529A	Ship stations, telephony, duplex operation  529A	
			8294-8300	Ship and Coast stations, telephony, simplex operation  US82	Ship and Coast stations, telephony, simplex operation  US82	
			8300-8340	Ship stations, wide-band telegraphy, facsimile, and special transmission systems  US296	Ship stations, wide-band telegraphy, facsimile, and special transmission systems  US296	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			8340- 8341.75	Ship stations, oceanographic data transmission	Ship stations, oceanographic data transmission	
			8341.75- 8365.75	Ship stations, A1A Morse telegraphy, working  501	Ship stations, A1A Morse telegraphy, working  501	
			8365.75- 8370.75	Ship stations, A1A Morse telegraphy, calling	Ship stations, A1A Morse telegraphy, calling	
			8370.75- 8376.25	Ship stations, A1A Morse telegraphy, working	Ship stations, A1A Morse telegraphy, working	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			8376.25- 8396.25	Ship stations, narrow-band direct-printing telegraphy and data transmis- sion systems (paired frequencies)  500B	Ship stations, narrow-band direct-printing telegraphy and data transmis- sion systems (paired frequencies)  500B	
			8396.25- 8414.25	Ship stations, narrow-band direct-printing telegraphy and A1A Morse te- legraphy, working (non- paired fre- quencies)	Ship stations, narrow-band direct-printing telegraphy and A1A Morse telegraphy, working (non- paired frequencies)	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			8414.25- 8416.25	Ship stations, digital selective call- ing  500A	Ship stations, digital selective calling  500A	
			8416.25- 8436.25	Coast stations, narrow-band direct-printing telegraphy and data transmis- sion systems (paired frequencies)  520B	Coast stations, narrow-band direct-printing telegraphy and data transmis- sion systems (paired frequencies)  520B	
			8436.25- 8438	Coast stations, digital selective call- ing	Coast stations, digital selective calling	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			8438-8707	Coast stations, wide-band and A1A Morse telegraphy, facsimile, special and data transmis- sion systems and direct- printing te- legraphy systems	Coast stations, wide-band and A1A Morse telegraphy, facsimile, special and data transmission systems and direct-printing telegraphy systems	
			8707-8815	Coast stations, telephony, duplex op- eration	Coast stations, telephony, duplex op- eration	
8815-8965 AERONAUTICAL MOBILE (R)			8815-8965	AERONAU- TICAL MOBILE (R)	AERONAU- TICAL MOBILE (R)	



## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
8965-9040 AERONAUTICAL MOBILE (OR)			8965-9040	AERONAU- TICAL MOBILE (OR)	AERONAUTIC AL MOBILE (OR)	Operation in the (OR) bands by Non-Govern- ment stations shall be authorized only by special ar- rangements between the FCC and the IRAC.
9040-9400 FIXED			9040-9500	FIXED	FIXED	
9400-9500 BROADCASTING 521A 521B 529B						
9500-9900 BROADCASTING  530 531			9500-9900	BROAD- CASTING  US235	BROADCASTI NG  US235	
9900-9995 FIXED			9900-9995	FIXED	FIXED	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
9995-10003 STANDARD FREQUENCY AND TIME SIGNAL (10 000 kHz)  501			9995-10005	STANDARD FREQUENCY AND TIME SIGNAL (10 000 kHz)	STANDARD FREQUENCY AND TIME SIGNAL (10 000 kHz)	FCC Rules and Regulations make no provi- sions for the li- censing of standard fre- quency stations.
				501 G106	501	
10003-10005 STANDARD FREQUENCY AND TIME SIGNAL Space Research  501						
10005-10100 AERONAUTICAL MOBILE (R)  501			10005- 10100	AERONAU- TICAL MOBILE (R)	AERONAU- TICAL MOBILE (R)	
				US283 501	US283 501	
10100-10150 FIXED Amateur 510			10100- 10150		AMATEUR	
				US247 510	US247 510	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
10150-11175 FIXED Mobile except aeronautical mobile (R)			10150- 11175	FIXED Mobile except aero- nautical mobile (R)	FIXED Mobile except aero- nautical mobile (R)	
11175-11275 AERONAUTICAL MOBILE (OR)			11175- 11275	AERONAU- TICAL MOBILE (OR)	AERONAU- TICAL MOBILE (OR)	Operation in the (OR) bands by Non-Govern- ment stations shall be authorized only by special ar- rangement between the FCC and the IRAC.
11275-11400 AERONAUTICAL MOBILE (R)			11275- 11400	AERONAU- TICAL MOBILE (R)  US283	AERONAU- TICAL MOBILE (R)  US283	
11400-11600 FIXED			11400- 11650	FIXED	FIXED	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
11600-11650 BROADCASTING 521A 521B 529B						
11650-12050 BROADCASTING  530 531			11650- 12050	BROAD- CASTING  US235	BROADCASTI NG  US235	
12050-12100 BROADCASTING 521A 521B 529B			12050- 12230	FIXED	FIXED	
12100-12230 FIXED						
12230-13200 MARITIME MOBILE 500A 500B 520B 529A			12230- 13200	MARITIME MOBILE	MARITIME MOBILE	See Annex H for Maritime Mobile channel use.
			12230- 12353	Ship stations, telephony, duplex opera- tion  529A	Ship stations, telephony, duplex opera- tion  529A	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			12353- 12368	Ship and Coast stations, telephony, simplex operation  US82	Ship and Coast stations, telephony, simplex operation  US82	
			12368- 12420	Ship stations, wide-band telegraphy, facsimile and special transmission systems  US296	Ship stations, wide-band telegraphy, facsimile and special transmission systems  US296	
			12420- 12421.75	Ship stations, oceanographic data transmission	Ship stations, oceanographic data transmission	
			12421.75- 12476.75	Ship stations, A1A Morse telegraphy, working	Ship stations, A1A Morse telegraphy, working	

# TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			12476.75- 12549.75	Ship stations, narrow-band direct-printing telegraphy and data transmis- sion systems (paired frequencies)  500B	Ship stations, narrow-band direct-printing telegraphy and data transmis- sion systems (paired frequencies)  500B	
			12549.75- 12554.75	Ship stations, A1A Morse telegraphy, calling	Ship stations, A1A Morse telegraphy, calling	
			12554.75- 12559.75	Ship stations, narrow-band direct-printing telegraphy and data transmis- sion systems (paired frequencies)	Ship stations, narrow-band direct-printing telegraphy and data transmis- sion systems (paired frequencies)	

# TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			12559.75- 12576.75	Ship stations, narrow-band direct-printing telegraphy and A1A Morse te- legraphy, working (non- paired fre- quencies)	Ship stations, narrow-band direct-printing telegraphy and A1A Morse telegraphy, working (non- paired frequencies)	
			12576.75- 12578.75	Ship stations, digital selective call- ing  500A	Ship stations, digital selective calling  500A	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			12578.75- 12656.75	Coast stations, narrow-band direct-printing telegraphy and data transmis- sion systems (paired frequencies)  520B	Coast stations, narrow-band direct-printing telegraphy and data transmis- sion systems (paired frequencies)  520B	
			12656.75- 12658.5	Coast stations, digital selective call- ing	Coast stations, digital selective calling	



# TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			12658.5- 13077	Coast stations, wide-band and A1A Morse telegraphy, facsimile, special and data transmis- sion systems and direct- printing te- legraphy systems	Coast stations, wide-band and A1A Morse telegraphy, facsimile, special and data transmission systems and direct-printing telegraphy systems	
			13077- 13200	Coast stations, telephony, duplex op- eration	Coast stations, telephony, duplex operation	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
13200-13260 AERONAUTICAL MOBILE (OR)			13200- 13260	AERONAU- TICAL MOBILE (OR)	AERONAUTIC AL MOBILE (OR)	Operation in the (OR) bands by Non-Govern- ment stations shall be authorized only by special ar- rangement between the FCC and the IRAC.
13260-13360 AERONAUTICAL MOBILE (R)			13260- 13360	AERONAU- TICAL MOBILE (R)  US283	AERONAU- TICAL MOBILE (R)  US283	
13360-13410 FIXED RADIO ASTRONOMY  533			13360- 13410	RADIO ASTRONOMY  533 G115	RADIO ASTRONOMY  533	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
13410-13570 FIXED Mobile except aeronautical mobile (R) 534			13410- 13600	FIXED Mobile except aero- nautical mobile (R)	FIXED	ISM 13560 ± 7 kHz
13570-13600 BROADCASTING 521A 521B 534A				534	534	
13600-13800 BROADCASTING  531			13600- 13800	BROAD- CASTING  US235	BROADCASTI NG  US235	
13800-13870 BROADCASTING 521A 521B 534A			13800- 14000	FIXED Mobile except aero- nautical mobile (R)	FIXED	
13870-14000 FIXED Mobile except aeronautical mobile (R)						
14000-14250 AMATEUR 510 AMATEUR-SATELLITE			14000- 14250	510	AMATEUR AMATEUR- SATELLITE  510	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
14250-14350 AMATEUR 510  535			14250- 14350	510	AMATEUR  510	
14350-14990 FIXED Mobile except aeronautical mobile (R)			14350- 14990	FIXED Mobile except aero- nautical mobile (R)	FIXED	
14990-15005 STANDARD FREQUENCY AND TIME SIGNAL (15 000 kHz)  501			14990- 15010	STANDARD FREQUENCY AND TIME SIGNAL (15 000 kHz)	STANDARD FREQUENCY AND TIME SIGNAL (15 000 kHz)	FCC Rules and Regulations make no provi- sions for the li- censing of standard fre- quency stations.
15005-15010 STANDARD FREQUENCY AND TIME SIGNAL Space Research				501 G106	501	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
15010-15100 AERONAUTICAL MOBILE (OR)			15010- 15100	AERONAU- TICAL MOBILE (OR)	AERONAUTIC AL MOBILE (OR)	Operation in the (OR) bands by Non-Govern- ment stations shall be authorized only by special ar- rangement between the FCC and the IRAC.
15100-15600 BROADCASTING  531			15100- 15600	BROAD- CASTING  US235	BROADCASTI NG  US235	
15600-15800 BROADCASTING 521A 521B 529B			15600- 16360	FIXED	FIXED	
15800-16360 FIXED 536						

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
15010-15100 AERONAUTICAL MOBILE (OR)			15010- 15100	AERONAU- TICAL MOBILE (OR)	AERONAUTIC AL MOBILE (OR)	Operation in the (OR) bands by Non-Govern- ment stations shall be authorized only by special ar- rangement between the FCC and the IRAC.
15100-15600 BROADCASTING  531			15100- 15600	BROAD- CASTING  US235	BROADCASTI NG  US235	
15600-15800 BROADCASTING 521A 521B 529B			15600- 16360	FIXED	FIXED	
15800-16360 FIXED 536						

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
16360-17410 MARITIME MOBILE  500A 500B 520B 529A			16360-17410	MARITIME MOBILE	MARITIME MOBILE	See Annex H for Maritime Mobile channel use.
			16360-16528	Ship stations, telephony, duplex operation  529A	Ship stations, telephony, duplex operation  529A	
			16528-16549	Ship and Coast stations, telephony, simplex operation  US82	Ship and Coast stations, telephony, simplex operation  US82	
			16549-16617	Ship stations, wide-band telegraphy, facsimile, and special transmission systems  US296	Ship stations, wide-band telegraphy, facsimile, and special transmission systems  US296	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			16617- 16618.75	Ship stations, oceanographic data transmission	Ship stations, oceanographic data transmission	
			16618.75- 16683.25	Ship stations, A1A Morse telegraphy, working	Ship stations, A1A Morse telegraphy, working	
			16683.25- 16733.75	Ship stations, narrow-band direct-printing telegraphy and data transmis- sion systems (paired frequencies)  500B	Ship stations, narrow-band direct-printing telegraphy and data transmis- sion systems (paired frequencies)  500B	
			16733.75- 16738.75	Ship stations, A1A Morse telegraphy, calling	Ship stations, A1A Morse telegraphy, calling	

# TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			16738.75- 16784.75	Ship stations, narrow-band direct-printing telegraphy and data transmis- sion systems (paired fre- quencies)	Ship stations, narrow-band direct-printing telegraphy and data transmis- sion systems (paired frequencies)	
			16784.75- 16804.25	Ship stations, narrow-band direct-printing and A1A Morse telegraphy, working (non- paired frequencies)	Ship stations, narrow-band direct-printing and A1A Morse telegraphy, working (non- paired frequencies)	
			16804.25- 16806.25	Ship stations, digital selective call- ing  500A	Ship stations, digital selective calling  500A	



TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			16806.25- 16902.75	Coast stations, narrow-band direct-printing telegraph and data transmis- sion systems (paired fre- quencies)  520B	Coast stations, narrow-band direct-printing telegraph and data transmis- sion systems (paired frequencies)  520B	
			16902.75- 16904.5	Coast stations, digital selective call- ing	Coast stations, digital selective calling	

## TABLES OF FREQUENCY ALLOCATIONS

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			16904.5-17242	Coast stations, wide-band and A1A Morse telegraphy, facsimile, special and data transmission systems and direct-printing telegraphy systems	Coast stations, wide-band and A1A Morse telegraphy, facsimile, special and data transmission systems and direct-printing telegraphy systems	
			17242-17410	Coast stations, telephony, duplex operation	Coast stations, telephony, duplex operation	
17410-17480 FIXED			17410-17550	FIXED	FIXED	
17480-17550 BROADCASTING 521A 521B 529B						

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
17550-17900 BROADCASTING  531			17550- 17900	BROAD- CASTING  US235	BROADCASTI NG  US235	
17900-17970 AERONAUTICAL MOBILE (R)			17900- 17970	AERONAU- TICAL MOBILE (R)  US283	AERONAU- TICAL MOBILE (R)  US283	
17970-18030 AERONAUTICAL MOBILE (OR)			17970- 18030	AERONAU- TICAL MOBILE (OR)	AERONAUTIC AL MOBILE (OR)	Operation in the (OR) bands by Non-Govern- ment stations shall be authorized only by special ar- rangement between the FCC and the IRAC.
18030-18052 FIXED			18030- 18068	FIXED	FIXED	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
18052-18068 FIXED Space Research						
18068-18168 AMATEUR 510 AMATEUR-SATELLITE  538			18068- 18168	510	AMATEUR AMATEUR- SATELLITE  510	
18168-18780 FIXED Mobile except aeronautical mobile			18168- 18780	FIXED Mobile	FIXED Mobile	
18780-18900 MARITIME MOBILE			18780- 18900	MARITIME MOBILE	MARITIME MOBILE	See Annex H for Maritime Mobile channel use.
			18780- 18825	Ship stations, telephony, duplex opera- tion	Ship stations, telephony, duplex opera- tion	

# TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			18825- 18846	Ship and Coast stations, telephony, simplex operation  US82	Ship and Coast stations, telephony, simplex operation  US82	
			18846- 18870	Ship stations, wide-band telegraphy, facsimile, and special transmission systems  US296	Ship stations, wide-band telegraphy, facsimile, and special transmission systems  US296	
			18870- 18892.75	Ship stations, narrow-band direct-printing telegraphy and data transmis- sion systems (paired fre- quencies)	Ship stations, narrow-band direct-printing telegraphy and data transmis- sion systems (paired frequencies)	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			18892.75- 18898.25	Ship stations, narrow-band direct-printing telegraphy and A1A Morse te- legraphy, working (non- paired fre- quencies)	Ship stations, narrow-band direct-printing telegraphy and A1A Morse telegraphy, working (non- paired frequencies)	
			18898.25- 18899.75	Ship stations, digital selective call- ing	Ship stations, digital selective calling	
18900-19020 BROADCASTING 521A 521B 529B			18900- 19680	FIXED	FIXED	
19020-19680 FIXED						
19680-19800 MARITIME MOBILE 520B			19680- 19800	MARITIME MOBILE	MARITIME MOBILE	See Annex H for Maritime Mobile channel use.

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			19680.25- 19703.25	Coast stations, narrow-band direct-printing telegraphy and data transmis- sion systems (paired fre- quencies)  520B	Coast stations, narrow-band direct-printing telegraphy and data transmis- sion systems (paired frequencies)  520B	
			19703.25- 19705	Coast stations, digital selective call- ing	Coast stations, digital selective calling	

# TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			19705- 19755	Coast stations, wide-band and A1A Morse telegraphy, facsimile, special and data transmis- sion systems and direct- printing te- legraphy systems	Coast stations, wide-band and A1A Morse telegraphy, facsimile, special and data transmission systems and direct-printing telegraphy systems	
			19755- 19800	Coast stations, telephony, duplex op- eration	Coast stations, telephony, duplex operation	
19800-19990 FIXED			19800- 19990	FIXED	FIXED	



## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
19990-19995 STANDARD FREQUENCY AND TIME SIGNAL Space Research  501			19990- 20010	STANDARD FREQUENCY AND TIME SIGNAL (20 000 kHz)	STANDARD FREQUENCY AND TIME SIGNAL (20 000 kHz)	FCC Rules and Regulations make no provi- sions for the li- censing of standard fre- quency stations.
19995-20010 STANDARD FREQUENCY AND TIME SIGNAL (20 000 kHz)  501				501 G106	501	
20010-21000 FIXED Mobile			20010- 21000	FIXED Mobile	FIXED	
21000-21450 AMATEUR 510 AMATEUR-SATELLITE			21000- 21450	510	AMATEUR AMATEUR- SATELLITE  510	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
21450-21850 BROADCASTING  531			21450- 21850	BROAD- CASTING  US235	BROADCASTI NG  US235	
21850-21870 FIXED  539			21850- 21924	FIXED	FIXED	
21870-21924 AERONAUTICAL FIXED						
21924-22000 AERONAUTICAL MOBILE (R)			21924- 22000	AERONAU- TICAL MOBILE (R)	AERONAUTIC AL MOBILE (R)	
22000-22855 MARITIME MOBILE 520B 540			22000- 22855	MARITIME MOBILE	MARITIME MOBILE	See Annex H for Maritime Mobile channel use.
			22000- 22159	Ship stations, telephony, duplex opera- tion	Ship stations, telephony, duplex opera- tion	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			22159- 22180	Ship and Coast stations, telephony, simplex operation  US82	Ship and Coast stations, telephony, simplex operation  US82	
			22180- 22240	Ship stations, wide-band telegraphy, facsimile and special transmission systems  US296	Ship stations, wide-band telegraphy, facsimile and special transmission systems  US296	
			22240- 22241.75	Ship stations, oceanographic data transmission	Ship stations, oceanographic data transmission	
			22241.75- 22279.25	Ship stations, A1A Morse telegraphy, working	Ship stations, A1A Morse telegraphy, working	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			22279.25- 22284.25	Ship stations, A1A Morse telegraphy, calling	Ship stations, A1A Morse telegraphy, calling	
			22284.25- 22351.75	Ship stations, narrow-band direct-printing telegraphy and data transmis- sion systems, working (paired freque- ncies)	Ship stations, narrow-band direct-printing telegraphy and data transmis- sion systems, working (paired frequencies)	
			22351.75- 22374.25	Ship stations, narrow-band direct-printing telegraphy and A1A Morse te- legraphy, working (non- paired fre- quencies)	Ship stations, narrow-band direct-printing telegraphy and A1A Morse telegraphy, working (non- paired frequencies)	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			22374.25- 22375.75	Ship stations, digital selective call- ing	Ship stations, digital selective calling	
			22375.75- 22443.75	Coast stations, narrow-band direct-printing telegraphy and data transmis- sion systems (paired frequencies)  520B	Coast stations, narrow-band direct-printing telegraphy and data transmis- sion systems (paired frequencies)  520B	
			22443.75- 22445.5	Coast stations, digital selective call- ing	Coast stations, digital selective calling	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			22445.5- 22696	Coast stations, wide-band and A1A Morse telegraphy, facsimile, special and data transmis- sion and direct- printing telegraphy systems	Coast stations, wide-band and A1A Morse telegraphy, facsimile, special and data transmission and direct- printing telegraphy systems	
			22696- 22855	Coast stations, telephony, duplex op- eration	Coast stations, telephony, duplex operation	
22855-23000 FIXED  540			22855- 23000	FIXED	FIXED	
23000-23200 FIXED Mobile except aeronautical mobile (R)  540			23000- 23200	FIXED Mobile except aero- nautical mobile (R)	FIXED	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
23200-23350 AERONAUTICAL FIXED AERONAUTICAL MOBILE (OR)			23200- 23350	AERONAU- TICAL MOBILE (OR)	AERONAUTIC AL MOBILE (OR)	Operation in the (OR) bands by Non-Govern- ment stations shall be authorized only by special ar- rangement between the FCC and the IRAC.
23350-24000 FIXED MOBILE except aeronautical mobile 541  542			23350- 24890	FIXED MOBILE except aero- nautical mobile	FIXED	
24000-24890 FIXED LAND MOBILE  542						

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
23200-23350 AERONAUTICAL FIXED AERONAUTICAL MOBILE (OR)			23200- 23350	AERONAU- TICAL MOBILE (OR)	AERONAUTIC AL MOBILE (OR)	Operation in the (OR) bands by Non-Govern- ment stations shall be authorized only by special ar- rangement between the FCC and the IRAC.
23350-24000 FIXED MOBILE except aeronautical mobile 541  542			23350- 24890	FIXED MOBILE except aero- nautical mobile	FIXED	
24000-24890 FIXED LAND MOBILE  542						

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
24890-24990 AMATEUR 510 AMATEUR-SATELLITE  542			24890- 24990	510	AMATEUR AMATEUR- SATELLITE  510	
24990-25005 STANDARD FREQUENCY AND TIME SIGNAL (25 000 kHz)			24990- 25010	STANDARD FREQUENCY AND TIME SIGNAL (25 000 kHz)	STANDARD FREQUENCY AND TIME SIGNAL (25 000 kHz)	
25005-25010 STANDARD FREQUENCY AND TIME SIGNAL Space Research				G106		
25010-25070 FIXED MOBILE except aeronautical mobile			25010- 25070		LAND MOBILE  NG112	25.02-25.06 kHz Industrial
25070-25210 MARITIME MOBILE			25070- 25210	MARITIME MOBILE  US281	MARITIME MOBILE  US281 NG112	See Annex H for Maritime Mobile channel use.



## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			25070- 25100	Ship stations, telephony, duplex opera- tion	Ship stations, telephony, duplex opera- tion	
			25100- 25121	Ship and Coast stations, telephony, simplex operation  US82	Ship and Coast stations, telephony, simplex operation  US82	
			25121- 25161.25	Ship stations, wide-band telegraphy, facsimile, and special transmission systems  US296	Ship stations, wide-band telegraphy, facsimile, and special transmission systems  US296	
			25161.25- 25171.25	Ship stations, A1A Morse telegraphy, working	Ship stations, A1A Morse telegraphy, working	

# TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			25171.25- 25172.75	Ship stations, A1A Morse telegraphy, calling	Ship stations, A1A Morse telegraphy, calling	
			25172.75- 25192.75	Ship stations, narrow-band direct-printing telegraphy and data transmis- sion systems (paired frequencies)	Ship stations, narrow-band direct-printing telegraphy and data transmis- sion systems (paired frequencies)	
			25192.75- 25208.25	Ship stations, narrow-band direct-printing telegraphy and data transmis- sion systems (non-paired frequencies)	Ship stations, narrow-band direct-printing telegraphy and data transmis- sion systems (non-paired frequencies)	
			25208.25- 25210	Ship stations, digital selective call- ing	Ship stations, digital selective calling	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
25210-25550 FIXED MOBILE except aeronautical mobile			25210- 25330		LAND MOBILE	25.12-25.32 kHz Industrial
			25330- 25550	FIXED MOBILE except aero- nautical mobile		
25550-25670 RADIO ASTRONOMY  545			25550- 25670	RADIO ASTRONOMY	RADIO ASTRONOMY	
				US74 545	US74 545	
25670-26100 BROADCASTING			25670- 26100	BROAD- CASTING	BROADCASTI NG	International broadcasting
				US25	US25	
26100-26175 MARITIME MOBILE 520B			26100- 26175	MARITIME MOBILE	MARITIME MOBILE	See Annex H for Maritime Mobile channel use.

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			26100.25- 26120.75	Coast stations, narrow-band direct-printing telegraphy and data transmis- sion systems (paired frequencies)  520B	Coast stations, narrow-band direct-printing telegraphy and data transmis- sion systems (paired frequencies)  520B	
			26120.75- 26122.5	Coast stations, digital selective call- ing	Coast stations, digital selective calling	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			26122.5- 26145	Coast stations, wide-band and A1A Morse telegraphy, facsimile, special and data transmis- sion systems and direct- printing te- legraphy systems	Coast stations, wide-band and A1A Morse telegraphy, facsimile, special and data transmission systems and direct-printing telegraphy systems	
			26145- 26175	Coast stations, telephony, duplex op- eration	Coast stations, telephony, duplex operation	
26175-27500 FIXED MOBILE except aeronautical mobile			26175- 26480		LAND MOBILE	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			26480- 26950	FIXED MOBILE except aero- nautical mobile  US10	US10	
			26950- 26960	546	FIXED  546	26.955 kHz International fixed public
			26960- 27230	546	MOBILE except aero- nautical mobile  546	ISM 27120 ± 160 kHz

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 kHz	Region 2 kHz	Region 3 kHz	Band kHz	Government Allocation	Non- Government Allocation	Remarks
			27230- 27410	546	FIXED MOBILE except aero- nautical mobile  546	ISM 27120 ± 160 kHz  Personal  Public Safety  Industrial  Land Transportation

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
27.5-28  METEOROLOGICAL AIDS FIXED MOBILE			27.41-27.54		LAND MOBILE	Industrial
			27.54-28	FIXED MOBILE  US298	US298	
28-29.7  AMATEUR AMATEUR-SATELLITE			28-29.7		AMATEUR AMATEUR- SATELLITE	
29.7-30.005  FIXED MOBILE			29.7-29.8		LAND MOBILE	Industrial
			29.8-29.89		FIXED	29.81-29.88 MHz Aeronautical fixed  International fixed public
			29.89-29.91	FIXED MOBILE		See Section 4.3.6 of the NTIA Manual for Channeling Plan.



TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
			29.91-30		FIXED	29.92-29.99 MHz Aeronautical fixed  International fixed public
			30-30.56	FIXED MOBILE		See Section 4.3.6 of the NTIA Manual for Channeling Plan.
30.005-30.01 SPACE OPERATION (satellite identification)  FIXED  MOBILE SPACE RESEARCH						
30.01-37.5  FIXED MOBILE						

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
			30.56-32		LAND MOBILE  NG124	Industrial  Land Transportation  Public Safety
			32-33	FIXED MOBILE		See Section 4.3.6 of the NTIA Manual for Channeling Plan.

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
			33-34		LAND MOBILE  NG124	33.00-33.01 MHz Land Transportation  33.01-33.11 MHz Public Safety  33.11-33.41 MHz Industrial  33.41-34 MHz Public Safety
			34-35	FIXED MOBILE		See Section 4.3.6 of the NTIA Manual for Channeling Plan.

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
			35-36		LAND MOBILE  NG124	35.00-35.19 MHz Industrial  35.19-35.69 MHz Domestic Public Industrial Public Safety  35.69-36.00 MHz Industrial
			36-37	FIXED MOBILE  US220		US220  See Section 4.3.6 of the NTIA Manual for Channeling Plan.

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
			37-37.5		LAND MOBILE  NG124	37.00-37.01 MHz Industrial  37.01-37.43 MHz Public Safety  37.43-37.5 MHz Industrial
37.5-38.25  FIXED MOBILE Radio Astronomy  547			37.5-38	Radio Astronomy  547	LAND MOBILE Radio Astronomy  547 NG59 NG124	37.50-37.89 MHz Industrial  37.89-38.00 Public Safety
			38-38.25	FIXED MOBILE RADIO ASTRONOMY  US81 547	RADIO ASTRONOMY  US81 547	See Section 4.3.6 of the NTIA Manual for Channeling Plan.

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
38.25-39.986 FIXED MOBILE			38.25-39	FIXED MOBILE		See Section 4.3.6 of the NTIA Manual for Channeling Plan.
			39-40		LAND MOBILE  NG124	Public Safety
39.986-40.02 FIXED MOBILE Space Research			40-42	FIXED MOBILE		See Section 4.3.6 of the NTIA Manual for Channeling Plan.
40.02-40.98 FIXED MOBILE  548				US210 US220 548	US210 US220 548	ISM 40.68 ± 0.02 MHz
40.98-41.015 FIXED MOBILE Space Research  549 550						

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
41.015-44  FIXED MOBILE  549 550						
			42-46.6		LAND MOBILE  NG124 NG141	42.00-42.95 MHz Public Safety 42.95-43.19 MHz Industrial 43.19-43.69 MHz Domestic Public Industrial Public Safety 43.69-44.61 MHz Land Transportation 44.61-46.60 MHz Public Safety
44-47  FIXED MOBILE  552						

## TABLES OF FREQUENCY ALLOCATIONS

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
			46.6-47	FIXED MOBILE		See Section 4.3.6 of the NTIA Manual for Channeling Plan.
47-68 BROADCASTING 553 554 555 559 561	47-50 FIXED MOBILE	47-50 FIXED MOBILE BROADCASTING	47-49.6		LAND MOBILE  NG124	47.00-47.43 MHz Public safety 47.43-47.69 MHz Public Safety Industrial 47.69-49.60 Industrial
			49.6-50	FIXED MOBILE		See Section 4.3.6 of the NTIA Manual for Channeling Plan.
		50-54  AMATEUR  556 557 558 560		50-54		AMATEUR



## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
	54-68 BROADCASTI NG Fixed Mobile  562	54-68 FIXED MOBILE BROADCASTI NG	54-72		BROADCASTI NG  NG128 NG149	Television bro- adcasting
68-74.8 FIXED MOBILE except aero- nautical mobile  564 565 567 568 571	68-72 BROADCASTI NG Fixed Mobile 563	68-74.8 FIXED MOBILE  566 568 571				
	72-73 FIXED MOBILE		72-73		FIXED MOBILE  NG3 NG49 NG56	72.02-72.98 MHz Operational fixed

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
	73-74.6 RADIO ASTRONOMY 570		73-74.6	RADIO AS- TRONOMY  US74	RADIO ASTRONOMY  US74	
	74.6-74.8 FIXED MOBILE		74.6-74.8	FIXED MOBILE  US273 572	FIXED MOBILE  US273 572	
74.8-75.2  AERONAUTICAL RADIONAVIGATION  572 572A			74.8-75.2	AERONAUTIC AL RADIO- NAVIGATION  572	AERONAUTIC AL  RADIONAVIG ATION  572	75 MHz Marker bea- cons.

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
75.2-87.5 FIXED MOBILE except aero- nautical mobile	75.2-75.4 FIXED MOBILE  571		75.2-75.4	FIXED MOBILE  US273 572	FIXED MOBILE  US273 572	
565 571 575 578	75.4-76 FIXED MOBILE	75.4-87 FIXED MOBILE  573 574 577 579	75.4-76		FIXED MOBILE  NG3 NG49 NG56	75.42-75.98 MHz Operational Fixed
	76-88 BROADCASTI NG Fixed Mobile	87-100 FIXED MOBILE BROADCASTI NG	76-88	576	BROADCASTI NG  576 NG128 NG129 NG149	Television bro- adcasting
	576					
87.5-100 BROADCASTI NG	88-100 BROADCASTI NG	580	88-108	US93	BROADCASTI NG  US93 NG2 NG128 NG129	FM broadcasting
581						

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
100-108  BROADCASTING  584 585 586 587 588 589						
108-117.975 AERONAUTICAL RADIONAVIGATION 590A			108-117.975	AERONAUTIC AL RADIO- NAVIGATION  G126 US93	AERONAUTIC AL  RADIONAVIG ATION  US93	
117.975-136 AERONAUTICAL MOBILE (R)  501 591 592 593 594			117.975- 121.9375	AERONAUTIC AL MOBILE (R)  US26 US28 501 591 592 593	AERONAUTIC AL MOBILE (R)  US26 US28 501 591 592 593	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
			121.9375- 123.0875	US30 US31 US33 US80 US102 US213 591	AERONAUTIC AL MOBILE  US30 US31 US33 US80 US102 US213 591	Private aircraft
			123.0875- 123.5875	AERONAUTIC AL MOBILE  US32 US33 US112 591 593	AERONAUTIC AL MOBILE  US32 US33 US112 591 593	123.1 MHz for SAR Scene-of Action commu- nications (See Section 7.5.4 of the NTIA Manual)
			123.5875- 128.8125	AERONAUTIC AL MOBILE (R)  US26 591	AERONAUTIC AL MOBILE (R)  US26 591	
			128.8125- 132.0125	591	AERONAUTIC AL MOBILE (R)  591	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
			132.0125- 136.00	AERONAUTIC AL MOBILE (R)  US26 591	AERONAUTIC AL MOBILE (R)  US26 591	
136-137	AERONAUTICAL MOBILE (R) Fixed Mobile except aeronautical mobile (R)  591 594A 595		136-137	US244 591	AERONAUTIC AL MOBILE (R)  US244 591	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
137-137.025 SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 599B SPACE RESEARCH (space-to-Earth) Fixed Mobile except aeronautical mobile(R)   						

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
137.025-137.175 SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) Fixed Mobile-Satellite (space-to-Earth) 599B Mobile except aeronautical mobile (R)			137.025- 137.175	SPACE OPERATION (space-to- Earth)	SPACE OPERATION (space-to- Earth)	
				METEOROLOG ICAL SATELLITE (space-to- Earth)	METEOROLOG ICAL- SATELLITE (space-to- Earth)	
				SPACE RESEARCH (space-to- earth)	SPACE RESEARCH (space-to- Earth)	
596 597 598 599 599A				Mobile- Satellite (space-to- Earth)	Mobile- Satellite (space-to- Earth)	
				US319 US320 599B	US319 US320 599B	
				US318 599A	US318 599A	



TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
137.175-137.825 SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 599B SPACE RESEARCH (space-to-Earth) Fixed Mobile except aeronautical mobile (R)			137.175- 137.825	SPACE OPERATION (space-to- Earth) METEOROLOG ICAL SATELLITE (space-to- Earth) SPACE RESEARCH (space-to- Earth) MOBILE- SATELLITE (space-to- Earth)	SPACE OPERATION (space-to- Earth) METEOROLOG ICAL SATELLITE (space-to- Earth) SPACE RESEARCH (space-to- Earth) MOBILE- SATELLITE (space-to- Earth)	
596 597 598 599 599A				US319 US320 599B  US318 599A	US319 US320 599B  US318 599A	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
137.825-138 SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) Fixed Mobile-Satellite (space-to-Earth) 599B Mobile except aeronautical mobile (R)			137.825-138	SPACE OPERATION (space-to- Earth) METEOROLOG ICAL- SATELLITE (space-to- Earth) SPACE RESEARCH (space-to- Earth) Mobile- Satellite (space-to- Earth)	SPACE OPERATION (space-to- Earth) METEOROLOG ICAL- SATELLITE (space-to- Earth) SPACE RESEARCH (space-to- Earth) Mobile- Satellite (space-to- Earth)	
596 597 598 599 599A				US319 US320 599B	US319 US320 599B	
				US318 599A	US318 599A	

# TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
138-143.6 AERONAUTIC AL MOBILE (OR)  600 601 602 604	138-143.6 FIXED MOBILE /RADIOLOCAT ION/ Space Research (space-to- Earth)	138-143.6 FIXED MOBILE Space Research (space-to- Earth)  599 603	138-144	FIXED MOBILE   US10 G30	US10	
143.6-143.65 AERONAUTIC AL MOBILE (OR) SPACE RESEARCH (space-to-Earth)  601 602 604	143.6-143.65 FIXED MOBILE SPACE RESEARCH (space-to- Earth) /RADIOLOCAT ION/	143.6-143.65 FIXED MOBILE SPACE RESEARCH (space-to- Earth)  599 603				

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
143.65-144 AERONAUTIC AL MOBILE (OR)	143.65-144 FIXED MOBILE /RADIOLOCAT ION/ Space Research (space-to- Earth)	143.65-144 FIXED MOBILE Space Research (space-to- Earth)				
600 601 602 604		599 603				

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
144-146 AMATEUR 510 AMATEUR-SATELLITE			144-146		AMATEUR AMATEUR- SATELLITE	
605 606				510	510	
146-148 FIXED MOBILE except aeronautical mobile (R)	146-148 AMATEUR  607	146-148 AMATEUR FIXED MOBILE  607	146-148		AMATEUR	

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
144-146 AMATEUR 510 AMATEUR-SATELLITE			144-146		AMATEUR AMATEUR- SATELLITE	
605 606				510	510	
146-148 FIXED MOBILE except aeronautical mobile (R)	146-148 AMATEUR  607	146-148 AMATEUR FIXED MOBILE  607	146-148		AMATEUR	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
148-149.9 FIXED MOBILE except aeronautical mobile (R) MOBILE- SATELLITE (Earth-to-space) MOBILE- SATELLITE (space-to-Earth) 599B	148-149.9 FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) 599B  608 608A 608C		148-149.9	FIXED MOBILE MOBILE- SATELLITE (Earth-to- space) 599B US319 US320 US323 US325  608 608A US10 G30	MOBILE- SATELLITE (Earth-to- space) 599B US319 US320 US323 US325  608 608A US10	
608 608A 608C						

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
149.9-150.05 LAND MOBILE-SATELLITE (Earth-to-space) 599B 609B RADIONAVIGATION-SATELLITE  608B 609 609A			149.9- 150.05	RADIONAVIG ATION SATELLITE MOBILE SATELLITE (Earth-to- space) 599B US319 US322  608B 609A	RADIONAVIG ATION SATELLITE MOBILE SATELLITE (Earth-to- space) 599B US319 US322  608B 609A	
150.05-153 FIXED MOBILE except aero- nautical mobile RADIO ASTRONOMY	150.05-156.7625 FIXED MOBILE  611 613 613A		150.05- 150.8	FIXED MOBILE  US216 G30	US216	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
			150.8- 156.2475	US216 613	LAND MOBILE  US216 613 NG4 NG51 NG112 NG117 NG124 NG148	150.80-150.98 MHz Land Transportation 150.98- 151.4825 MHz Public Safety 151.4825- 151.4975 MHz Industrial 151.4975- 152.000 MHz Industrial Public Safety 152.00- 152.255 MHz Domestic Public 152.255- 152.465 MHz Land Transportation 152.465- 152.495 MHz



TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
153-154 FIXED MOBILE except aero- nautical mobile (R) Meteorological Aids						
154-156.7625 FIXED MOBILE except aero- nautical mobile (R)  613 613A						
			156.2475- 157.0375	US77 US106 US107 US266 613	MARITIME MOBILE  US77 US106 US107 US266 613 NG117	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
156.7625-156.8375 MARITIME MOBILE (distress and calling)  501 613						
156.8375-174 FIXED MOBILE except aero- nautical mobile  613 613B 615	156.8375-174 FIXED MOBILE  613 616 617 618					
			157.0375- 157.1875	MARITIME MOBILE  US214 US266 613 G109	US214 US266 613	
			157.1875- 157.45	US223 US266 613	MARITIME MOBILE LAND MOBILE  US223 US266 613 NG111 NG154	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
			157.45- 161.575	US266 613	LAND MOBILE  US266 613 NG6 NG28 NG70 NG111 NG112 NG124 NG148	157.45- 157.725 MHz Land Transportation  157.725- 157.755 MHz Industrial  157.755- 158.115 MHz Domestic Public  158.115- 158.475 MHz Industrial  158.715- 159.480 Public Safety  159.480- 161.575 MHz

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
			161.575- 161.625	US77 613	MARITIME MOBILE  US77 613 NG6 NG17	
			161.625- 161.775	613	LAND MOBILE  613 NG6	Remote pickup broadcast
			161.775- 162.0125	US266 613	MARITIME MOBILE LAND MOBILE  US266 613 NG6 NG154	
			162.0125- 173.2	FIXED MOBILE  US8 US11 US13 US216 US223 US300 US312 613 G5	US8 US11 US13 US216 US223 US300 US312 613	The Channeling Plan for assignments in this band is shown in Sec- tion 4.3.7 of the NTIA Manual.

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
			173.2-173.4		FIXED Land Mobile  NG124	Industrial Public Safety
			173.4-174	FIXED MOBILE  G5		The Channeling Plan of assign- ments in this band is shown in Section 4.3.7 of the NTIA Manual.
174-223 BROADCASTI NG  621 623 628 629	174-216 BROADCASTI NG Fixed Mobile  620	174-223 FIXED MOBILE BROADCASTI NG  619 624 625 626 630	174-216		BROADCASTI NG  NG115 NG128 NG149	Television broadcasting

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
	216-220 FIXED MARITIME MOBILE Radiolocation 627  627A		216-220	MARITIME MOBILE Aeronautical Mobile Fixed Land Mobile Radiolocation   US210 US229 US274 US317 627 G2	MARITIME MOBILE Aeronautical Mobile Fixed Land Mobile   US210 US229 US274 US317 627 NG152	
	220-225 AMATEUR FIXED MOBILE Radiolocation 627		220-222	LAND MOBILE Radiolocation  627 G2	LAND MOBILE  627	The Channeling Plan for Land Mobile assign- ments in this band is shown in Section 4.3.15 of the NTIA Manual.

# TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
			222-225	Radiolocation	AMATEUR	
223-230 BROADCASTI NG Fixed Mobile  622 628 629 631 632 635		223-230 FIXED MOBILE BROADCASTI NG AERONAUTIC AL  RADIONAVIG ATION Radiolocation  636 637		627 G2	627	
	225-235 FIXED MOBILE		225-235	FIXED MOBILE  G27		The FAA provides air traffic control communica- tions to the military services on se- lected frequen- cies in this band.

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
230-235 FIXED MOBILE  629 632 635 638 639		230-235 FIXED MOBILE AERONAUTIC AL  RADIONAVIG ATION  637				
235-267  FIXED MOBILE  501 592 635 640 641 642			235-267	FIXED MOBILE  501 592 642 G27 G100	501 592 642	The FAA provides air traffic control communica- tions to the military services on se- lected frequen- cies in this band.



TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
267-272	FIXED MOBILE Space Operation (space-to-Earth)		267-322	FIXED MOBILE		The FAA provides air traffic control communications to the military services on selected frequencies in this band.
	641 643					
272-273	SPACE OPERATION (space-to-Earth) FIXED MOBILE					
	641					
273-312	FIXED MOBILE					
	641					

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
312-315  FIXED MOBILE Mobile-Satellite (Earth-to-space) 641 641A						
315-322  FIXED MOBILE  641				G27 G100		
322-328.6  FIXED MOBILE RADIO ASTRONOMY  644			322-328.6	FIXED MOBILE  644 G27	644	The FAA provides air traffic control communications to the military services on selected frequencies in this band.

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
328.6-335.4  AERONAUTICAL RADIONAVIGATION  645 645A			328.6-335.4	AERONAUTIC AL	AERONAUTIC AL	
				RADIONAVIG- ATION  645	RADIONAVIG ATION  645	
335.4-387  FIXED MOBILE  641			335.4-399.9	FIXED MOBILE  G27 G100		The FAA provides air traffic control communica- tions to the military services on se- lected frequen- cies in this band.
387-390  FIXED MOBILE Mobile-Satellite (space-to-Earth) 641 641A						
390-399.9  FIXED MOBILE  641						

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
328.6-335.4 AERONAUTICAL RADIONAVIGATION 645 645A			328.6-335.4	AERONAUTIC AL RADIONAVIG- ATION 645	AERONAUTIC AL RADIONAVIG ATION 645	
335.4-387 FIXED MOBILE 641			335.4-399.9	FIXED MOBILE G27 G100		The FAA provides air traffic control communica- tions to the military services on se- lected frequen- cies in this band.
387-390 FIXED MOBILE Mobile-Satellite (space-to-Earth) 641 641A						
390-399.9 FIXED MOBILE 641						

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
399.9-400.05 RADIONAVIGATION-SATELLITE  609 645B			399.9-400.05	399.9-400.05 RADIONAVIGATION-SATELLITE MOBILE-SATELLITE (Earth-to-space) US319 US326  645B	399.9-400.05 RADIONAVIGATION-SATELLITE MOBILE-SATELLITE (Earth-to-space) US319 US326  645B	
400.05-400.15 STANDARD FREQUENCY AND TIME SIGNAL-SATELLITE (400.1 MHz)  646 647			400.05-400.15	STANDARD FREQUENCY AND TIME SIGNAL-SATELLITE (400.1 MHz)  646	STANDARD FREQUENCY AND TIME SIGNAL-SATELLITE (400.1 MHz)  646	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
<div>400.15-401</div> METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 599B SPACE RESEARCH (space-to-Earth) 647A Space Operation (space-to-Earth)			400.15-401	METEOROLOGICAL AIDS (radio-sonde) METEOROLOGICAL SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) 647A MOBILE-SATELLITE (space-to-Earth) 599B US319 US320 US324 Space Operation (space-to-Earth)	METEOROLOGICAL AIDS (radio-sonde) SPACE RESEARCH (space-to-Earth) 647A MOBILE-SATELLITE (space-to-Earth) 599B US319 US320 US324 Space Operation (space-to-Earth)	SATELLITE COMMUNICATION (25)
647 647B					647 647B	

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
400.15-401 METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 599B SPACE RESEARCH (space-to-Earth) 647A Space Operation (space-to-Earth)			400.15-401	METEOROLOGICAL AIDS (radio-sonde) METEOROLOGICAL SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) 647A MOBILE-SATELLITE (space-to-Earth) 599B US319 US320 US324 Space Operation (space-to-Earth)	METEOROLOGICAL AIDS (radio-sonde) SPACE RESEARCH (space-to-Earth) 647A MOBILE-SATELLITE (space-to-Earth) 599B US319 US320 US324 Space Operation (space-to-Earth)  647 647B	SATELLITE COMMUNICATION (25)

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
401-402	METEOROLOGICAL AIDS SPACE OPERATION (space-to-Earth) Earth Exploration-Satellite (Earth-to-space) Fixed Meteorological-Satellite (Earth-to-space) Mobile except aeronautical mobile		401-402	METEOROLOGICAL AIDS (Radiosonde) SPACE OPERATION (space-to-Earth) Earth Exploration-Satellite (Earth-to-space) Meteorological-Satellite (Earth-to-space)  US70	METEOROLOGICAL AIDS (Radiosonde) SPACE OPERATION (space-to-Earth) Earth Exploration-Satellite (Earth-to-space) Meteorological-Satellite (Earth-to-space)  US70	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
402-403	METEOROLOGICAL AIDS Earth Exploration-Satellite (Earth-to-space) Fixed Meteorological-Satellite (Earth-to-space) Mobile except aeronautical mobile		402-403	METEOROLOGICAL AIDS (Radiosonde) Earth Exploration-Satellite (Earth-to-space) Meteorological-Satellite (Earth-to-space)  US70	METEOROLOGICAL AIDS (Radiosonde) Earth Exploration-Satellite (Earth-to-space) Meteorological-Satellite (Earth-to-space)  US70	
403-406	METEOROLOGICAL AIDS Fixed Mobile except aeronautical mobile  648		403-406	METEOROLOGICAL AIDS (Radiosonde)  US70 G6	METEOROLOGICAL AIDS (Radiosonde)  US70	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
406-406.1	MOBILE-SATELLITE (Earth-to-space)		406-406.1	MOBILE-SAT- ELLITE (Earth-to- space)	MOBILE-SAT- ELLITE (Earth-to- space)	Satellite Emer- gency Position Indicating Radiobeacon (EPIRB).
	649 649A			649 649A	649 649A	
406.1-410	FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY		406.1-410	FIXED MOBILE RADIO AS- TRONOMY	RADIO ASTRONOMY	The Channeling Plan for assignments in these bands are shown in Section 4.3.9 of the NTIA Manual.
	648 650			US13 US74 US117 G5 G6	US13 US74 US117	
410-420	FIXED MOBILE except aeronautical mobile Space Research (space-to-space) 651A		410-420	FIXED MOBILE Space Research (space-to- space)	US13	
				US13 G5 651A		



TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
420-430 FIXED MOBILE except aeronautical mobile Radiolocation 651 652 653			420-450	RADIOLOCATI ON US7 US87 US217 US228 US230 664 668 G2 G8	Amateur US7 US87 US217 US228 US230 664 668 NG135	
430-440 AMATEUR RADIOLOCATI ON 653 654 655 656 657 658 659 661 662 663 664 665	430-440 RADIOLOCATION Amateur 653 658 659 660 660A 663 664					
440-450 FIXED MOBILE except aeronautical mobile Radiolocation 651 652 653 666 667 668						

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
450-460	FIXED MOBILE  653 668 669 670		450-460	US87 668 669 670	LAND MOBILE  US87 668 669 670 NG12 NG112 NG124 NG148	450-451 MHz Remote pickup broad- cast  451-454 MHz Public Safety Industrial Land Transportation  454-455 MHz Domestic Public  455-456 MHz Remote pickup broad- cast  456-459 MHz Public Safety Industrial Land

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
460-470	FIXED MOBILE Meteorological-Satellite (space-to-Earth)  669 670 671 672		460-470	Meteorological-Satellite (space-to-Earth)  US201 US209 US216 669 670 671	LAND MOBILE  US201 US209 US216 669 670 671 NG124	460-462.5375 MHz Public Safety Industrial Land Transportation  462.5375-462.7375 MHz Personal  462.7375-467.5375 MHz Public Safety Industrial Land Transportation  467.5375-467.7375 MHz Personal  467.7375-470 MHz

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
470-790 BROADCASTI NG  676 677A 683 684 685 686 686A 687 689 693 694	470-512 BROADCASTI NG Fixed Mobile  674 675	470-585 FIXED MOBILE BROADCASTI NG  673 677 679	470-512		BROADCASTI NG LAND MOBILE  NG66 NG114 NG127 NG128 NG149	Broadcasting Public Safety Industrial Land Transportation Domestic Public
	512-608 BROADCASTI NG  678	585-610 FIXED MOBILE BROADCASTI NG RADIONAVIG ATION  688 689 690	512-608		BROADCASTI NG  NG128 NG149	Television broadcasting

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
	608-614 RADIO ASTRONOMY Mobile-Satellite except aeronauti- cal mobile- satel- lite (Earth- to-space)		608-614	RADIO AS- TRONOMY  US74 US246	RADIO ASTRONOMY  US74 US246	
		610-890 FIXED MOBILE BROADCASTI NG				
	614-806 BROADCASTI NG Fixed Mobile	677 688 689 690 691 693 701	614-806		BROADCASTI NG  NG30 NG43 NG128 NG149	
790-862 FIXED BROADCASTI NG	675 692 692A 693					

694 695 695A  
696 697 700B  
702

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
	806-890 FIXED MOBILE BROADCASTI NG  692A 700 700A		806-902	US116 US268 704A G2	LAND MOBILE  US116 US268 704A NG30 NG43 NG63 NG151	806-821 MHz Conventional and Trunked Systems 821-824 MHz Public Safety 824-825 MHz Cellular 825-849 MHz Cellular 849-851 MHz Reserve 851-866 MHz Conventional and Trunked Systems 866-869 MHz Public Safety 869-870 MHz Cellular 890-894 MHz Cellular

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
862-890 FIXED MOBILE except aero- nautical mobile BROADCASTI NG 703  700B 704						
890-942 FIXED MOBILE except aero- nautical mobile BROADCASTI NG 703 Radiolocation	890-902 FIXED MOBILE except aero- nautical mobile Radiolocation  700A 704A 705	890-942 FIXED MOBILE BROADCASTI NG Radiolocation  706				

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
	902-928 FIXED Amateur Mobile except aero- nautical mobile Radiolocation  705 707 707A		902-928	RADIOLOCATI ON  US215 US218 US267 US275 707 G11 G59	US215 US218 US267 US275 707	ISM 915 ± 13 MHz
	928-942 FIXED MOBILE except aero- nautical mobile Radiolocation		928-929	US116 US215 US268 G2	FIXED  US116 US215 US268 NG120	
	705		929-932	US116 US215 US268 G2	LAND MOBILE  US116 US215 US268 NG120	



## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
			932-935	FIXED  US215 US268 G2	FIXED  US215 US268 NG120	The Channeling Plan for assignments in this band is shown in Sec- tion 4.3.14 of the NTIA Manual.
			935-940	US116 US215 US268 G2	LAND MOBILE  US116 US215 US268 N120	
			940-941	US116 US268 G2	MOBILE  US116 US268	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
			941-944	FIXED  US268 US301 US302 G2	FIXED  US268 US301 US302 NG64 NG120	The Channeling Plan for assignments in this band is shown in Sec- tion 4.3.14 of the NTIA Manual.
942-960 FIXED MOBILE except aero- nautical mobile BROADCASTI NG 703  704	942-960 FIXED MOBILE	942-960 FIXED MOBILE BROADCASTI NG  701	944-960		FIXED  NG64 NG120	
960-1215  AERONAUTICAL RADIONAVIGATION  709			960-1215	AERONAUTIC AL RADIO- NAVIGATION  US224 709	AERONAUTIC AL RADIO- NAVIGATION  US224 709	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
1215-1240 RADIOLOCATION RADIONAVIGATION-SATELLITE (space-to-Earth) 710  711 712 712A 713			1215-1240	RADIOLOCA- TION RADIONAVIG ATION- SATELLITE (space- to-Earth)  713 G56	713	
1240-1260 RADIOLOCATION RADIONAVIGATION-SATELLITE (space-to-Earth) 710  Amateur  711 712 712A 713 714			1240-1300	RADIOLOCA- TION  664 713 714 G56	Amateur  664 713 714	
1260-1300 RADIOLOCATION Amateur  664 711 712 712A 713 714						

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
1215-1240  RADIOLOCATION RADIONAVIGATION-SATELLITE (space-to-Earth) 710  711 712 712A 713			1215-1240	RADIOLOCA- TION RADIONAVIG ATION- SATELLITE (space- to-Earth)  713 G56	713	
1240-1260  RADIOLOCATION RADIONAVIGATION-SATELLITE (space-to-Earth) 710  Amateur  711 712 712A 713 714			1240-1300	RADIOLOCA- TION  664 713 714 G56	Amateur  664 713 714	
1260-1300  RADIOLOCATION Amateur  664 711712 712A 713 714						

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
1300-1350 AERONAUTICAL RADIONAVIGATION 717 Radiolocation  715 716 718			1300-1350	AERONAUTIC AL  RADIONAVIG- ATION Radiolocation  717 718 G2	AERONAUTIC AL  RADIONAVIG ATION   717 718	
1350-1400 FIXED MOBILE RADIOLOCATI ON  718 719 720	1350-1400 RADIOLOCATION  714 718 720		1350-1400	FIXED MOBILE RADIOLOCA- TION  US311 714 718 720 G2 G27 G114	US311 714 718 720	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
1400-1427	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)  721 722		1400-1427	EARTH EXPLORA- TION- SATELLITE (Passive) RADIO AS- TRONOMY SPACE RE- SEARCH (Passive)  US74 US246 722	EARTH EXPLORA- TION- SATELLITE (Passive) RADIO AS- TRONOMY SPACE RE- SEARCH (Passive)  US74 US246 722	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
1427-1429 SPACE OPERATION (Earth-to-space) FIXED MOBILE except aeronautical mobile  722			1427-1429	FIXED MOBILE ex- cept aero- nautical mobile SPACE OPERATION (Earth-to- space)  722 G30	SPACE OPERATION (Earth-to- space) Land Mobile (Telemetry and telecommand) Fixed (Telemetry)  722	
1429-1452 FIXED MOBILE except aeronautical mobile 722 723B	1429-1452  FIXED MOBILE 723  722		1429-1435	FIXED MOBILE  722 G30	Land Mobile (Telemetry and telecommand) Fixed (Telemetry)  722	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
1452-1492 FIXED MOBILE except aeronautical mobile BROADCASTI NG 722A 722B BROADCASTI NG-SATEL- LITE 722A 722B  722 723B	1452-1492  FIXED MOBILE 723 BROADCASTING 722A 722B BROADCASTING- SATELLITE 722A 722B  722 722C		1435-1525	MOBILE (Aeronautical telemetry)  US78 722	MOBILE (Aeronautical telemetry)  US78 722	
1492-1525 FIXED MOBILE except aero- nautical mobile  722 723B	1492-1525 FIXED MOBILE 723 MOBILE- SATELLITE (space-to-Earth)  722 722C 723C	1492-1525 FIXED MOBILE 723  722				

# TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
1525-1530 SPACE OPERATION (space-to- Earth) FIXED MARITIME MOBILE-SAT- ELLITE (space- to- Earth) Earth Exploration- Satellite Land Mobile- Satel lite (space-to- Earth) 726B Mobile except aero- nautical mobile 724  722 723B 725 726A 726D	1525-1530 SPACE OPERATION (space-to- Earth) MOBILE- SATELLITE (space-to- Earth) Earth Exploration- Satellite Fixed Mobile 723  722 723A 726A 726D	1525-1530 SPACE OPERATION (space-to- Earth) FIXED MOBILE- SATELLITE (space-to- Earth) Earth Exploration- Satellite Mobile 723 724  722 726A 726D	1525-1530	MOBILE- SATELLITE (Space-to- Earth) Mobile (Aero- nautical tele- metry)       722 726A US78	MOBILE- SATELLITE (Space-to- Earth) Mobile (Aero- nautical tele- metry)       722 726A US78	



TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
1530-1533 SPACE OPERATION (space-to- Earth) MARITIME MOBILE- SATELLITE (space- to-Earth) LAND MOBILE- SATELLITE (space- to-Earth) Earth Exploration- Satellite Fixed Mobile except aero- nautical mobile  722 723B 726A	1530-1533 SPACE OPERATION (space-to-Earth) MARITIME MOBILE- SATELLITE (space- to-Earth) LAND MOBILE- SATELLITE (space-to- Earth) Earth Exploration-Satellite Fixed Mobile 723  722 726A 726C 726D		1530-1535	MARITIME MOBILE- SATELLITE (space- to-Earth) MOBILE- SATELLITE (space-to- Earth) Mobile (Aeronautical telemetry)  US78 US272 US315 722 726A	MARITIME MOBILE- SATELLITE (space- to-Earth) MOBILE- SATELLITE (space-to- Earth) Mobile (Aeronautical telemetry)  US78 US272 US315 722 726A	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
1533-1535 SPACE OPERATION (space-to- Earth) MARITIME MOBILE- SATELLITE (space- to-Earth) Earth Exploration- Satellite Fixed Mobile except aero- nautical mobile Land Mobile- Satellite (space- to-Earth) 726B  722 723B 726A 726D	1533-1535 SPACE OPERATION (space-to-Earth) MARITIME MOBILE- SATELLITE (space- to-Earth) Earth Exploration-Satellite Fixed Mobile 723 Land Mobile-Satellite (space-to- Earth) 726B  722 726A 726C 726D					

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
1535-1544 MARITIME MOBILE-SATELLITE (space-to-Earth) Land Mobile-Satellite (space-to-Earth) 726B  722 726A 726C 726D 727			1535-1544	MARITIME MOBILE- SATELLITE (space- to-Earth) MOBILE- SATELLITE (space-to- Earth)  US315 722 726A	MARITIME MOBILE- SATELLITE (space- to-Earth) MOBILE- SATELLITE (space-to- Earth)  US315 722 726A	
1544-1545 MOBILE-SATELLITE (space-to-Earth)  722 726D 727 727A			1544-1545	MOBILE-SAT- ELLITE (space-to- Earth)  722 727A	MOBILE-SAT- ELLITE (space-to- Earth)  722 727A	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
1545-1555	AERONAUTICAL MOBILE-SATELLITE (R) (space-to-Earth)  722 726A 726D 727 729 729A 730		1545-1549.5	AERONAUTIC AL MOBILE- SATELLITE (R) (space-to- Earth) Mobile- Satellite (space-to- Earth)  US308 US309 722 726A	AERONAUTIC AL MOBILE- SATELLITE (R) (space-to- Earth) Mobile- Satellite (space-to- Earth)  US308 US309 722 726A	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
1555-1559  LAND MOBILE-SATELLITE (space-to-Earth)  722 726A 726D 727 730 730A 730B 730C			1549.5-1558.5	AERONAUTIC AL MOBILE-SATELLITE (R) (space-to-Earth)	AERONAUTIC AL MOBILE-SATELLITE (R) (space-to-Earth)	
				MOBILE-SATELLITE (space-to-Earth)	MOBILE-SATELLITE (space-to-Earth)	
			US308 US309 722 726A	US308 US309 722 726A		
			1558.5-1559	AERONAUTIC AL MOBILE-SATELLITE (R) (space-to-Earth)	AERONAUTIC AL MOBILE-SATELLITE (R) (space-to-Earth)	
				US308 US309 722 726A	US308 US309 722 726A	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
1559-1610 AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (space-to-Earth) 722 727 730 731			1559-1610	AERONAUTIC AL  RADIONAVIG- ATION RADIONAVIG ATION- SATELLITE (space- to-Earth)  G126 US208 US260 722	AERONAUTIC AL  RADIONAVIG- ATION RADIONAVIG ATION- SATELLITE (space- to-Earth)  US208 US260 722	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
1610-1610.6	1610-1610.6	1610-1610.6	1610-1610.6	AERONAUTIC AL	AERONAUTIC AL	
MOBILE- SATELLITE (Earth-to- space) AERONAUTIC AL RADIO- NAVIGATION	MOBILE- SATELLITE (Earth-to- space) AERONAUTIC AL RA- DIONAVIGATI ON RADIOETER MINATION- SATELLITE (Earth- to-space)	MOBILE- SATELLITE (Earth-to- space) AERO- NAUTICAL RA- DIONAVIGATI ON Radiodetermin ation- Satellite(Earth- to- space)		RADI- ONAVIG- ATION RADIOETER MINATION SATELLITE (Earth-to- space) MOBILE- SATELLITE (Earth-to- space)	RADIONAVIG- ATION RADIOETER MINATION SATELLITE (Earth-to- space) MOBILE- SATELLITE (Earth-to- space)	
722 727 730 731 731E 732 733 733A 733B 733E 733F	722 731E 732 733 733A 733C 733D 733E	722 727 730 731E 732 733 733A 733B 733E		US208 US260 US319 722 731E 732 733 733A 733E	US208 US260 US319 722 731E 732 733 733A 733E	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
1610.6-1613.8	1610.6-1613.8	1610.6-1613.8	1610.6- 1613.8	AERONAUTIC AL RADI- ONAVIG- ATION RADIOETER MINATION SATELLITE (Earth-to- space) MOBILE- SATELLITE (Earth-to- space) RADIO- ASTRONOMY	AERONAUTIC AL  RADIONAVIG- ATION RADIOETER MINATION SATELLITE (Earth-to- space) MOBILE- SATELLITE (Earth-to- space) RADIO- ASTRONOMY	
MOBILE- SATELLITE (Earth-to- space) RADIO ASTRONOMY AERONAUTIC AL RADIO- NAVIGATION	MOBILE- SATELLITE (Earth-to- space) RADIO ASTRONOMY AERONAUTIC AL RA- DIONAVIGATI ON RADIOETER MINATION- SATELLITE (Earth- to-space)	MOBILE- SATELLITE (Earth-to- space) RADIO ASTRONOMY AERO- NAUTICAL RA- DIONAVIGATI ON Radiodetermin ation- Satellite (Earth- to-space)		US208 US260 US319 722 731E 732 733 733A 733E 734	US208 US260 US319 722 731E 732 733 733A 733E 734	
722 727 730 731 731E 732 733 733A 733B 733E 733F 734	722 731E 732 733 733A 733C 733D 733E 734	722 727 730 731E 732 733 733A 733B 733E 734				



# TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
1613.8-1626.5	1613.8-1626.5	1613.8-1626.5	1613.8- 1626.5	AERONAUTIC AL	AERONAUTIC AL	
MOBILE- SATELLITE (Earth-to- space) AERONAUTIC AL RADIO- NAVIGATION Mobile Satellite (space-to- Earth)	MOBILE- SATELLITE (Earth-to- space) AERONAUTIC AL RA- DIONAVIGATI ON RADIOETER MINATION- SATELLITE (Earth- to-space) Mobile Satellite (space-to-Earth)	MOBILE- SATELLITE (Earth-to- space) AERO- NAUTICAL RA- DIONAVIGATI ON Radiodetermin ation- Satellite (Earth- to-space) Mobile Satellite (space-to-Earth)		RADI- ONAVIG- ATION RADIOETER MINATION SATELLITE (Earth-to- space) MOBILE- SATELLITE (Earth-to- space) Mobile- Satellite (space-to- Earth)	RADIONAVIG- ATION RADIOETER MINATION SATELLITE (Earth-to- space) MOBILE- SATELLITE (Earth-to- space) Mobile- Satellite (space-to- Earth)	
722 727 730 731 731E 731F 732 733 733A 733B 733E 733F	722 731E 731F 732 733 733A 733C 733D 733E	722 727 730 731E 731F 732 733 733A 733B 733E		US208 US260 US319 722 731E 731F 732 733 733E	US208 US260 US319 722 731E 731F 732 733 733E	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
1626.5-1631.5 MARITIME MOBILE-SAT ELLITE (Earth- to- space) Land Mobile- Satel lite (Earth-to- space) 726B  722 726A 726D 727 730	1626.5-1631.5  MOBILE- SATELLITE (Earth- to-space)    722 726A 726C 726D 727 730		1626.5- 1645.5	MARITIME MOBILE- SATELLITE (Earth- to-space) MOBILE- SATELLITE (Earth-to- space)  US315 722 726A	MARITIME MOBILE- SATELLITE (Earth- to-space) MOBILE- SATELLITE (Earth-to- space)  US315 722 726A	
1631.5-1634.5 MARITIME MOBILE-SATELLITE (Earth-to-space) LAND MOBILE-SATELLITE (Earth-to- space)  722 726A 726C 726D 727 730 734A						

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
1634.5-1645.5 MARITIME MOBILE-SATELLITE (Earth-to-space) Land Mobile-Satellite (Earth-to-space) 726B  722 726A 726C 726D 727 730						
1645.5-1646.5 MOBILE-SATELLITE (Earth-to-space)  722 726D 734B			1645.5- 1646.5	MOBILE-SAT- ELLITE (Earth-to- space)  722 734B	MOBILE-SAT- ELLITE (Earth-to- space)  722 734B	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
1646.5-1656.5 AERONAUTICAL MOBILE-SATELLITE (R) (Earth-to-space)  722 726A 726D 727 729A 730 735			1646.5- 1651	AERONAUTIC AL MOBILE- SATELLITE (R) (Earth-to- space) Mobile- Satellite (Earth-to- space)  US308 US309 722 726A	AERONAUTIC AL MOBILE- SATELLITE (R) (Earth-to- space) Mobile- Satellite (Earth-to- space)  US308 US309 722 726A	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
			1651-1660	AERONAUTIC AL MOBILE- SATELLITE (R) (Earth-to- space)	AERONAUTIC AL MOBILE- SATELLITE (R) (Earth-to- space)	
1656.5-1660	LAND MOBILE-SATELLITE (Earth-to- space)			MOBILE- SATELLITE (Earth-to- space)	MOBILE- SATELLITE (Earth-to- space)	
722 726A 726D 727 730 730A 730B 730C 734A				US308 US309 722 726A	US308 US309 722 726A	
1660-1660.5	LAND MOBILE-SATELLITE (Earth-to- space)		1660- 1660.5	AERONAUTIC AL MOBILE- SATELLITE (R) (Earth-to- space)	AERONAUTIC AL MOBILE- SATELLITE (R) (Earth-to- space)	
RADIO ASTRONOMY				RADIO ASTRONOMY	RADIO ASTRONOMY	
722 726A 726D 730A 730B 730C 736				US309 722 726A 736	US309 722 726A 736	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
1660.5-1668.4 RADIO ASTRONOMY SPACE RESEARCH (passive) Fixed Mobile except aeronautical mobile  722 736 737 738 739			1660.5- 1668.4	RADIO AS- TRONOMY SPACE RE- SEARCH (Passive)  US74 US246 722	RADIO AS- TRONOMY SPACE RE- SEARCH (Passive)  US74 US246 722	
1668.4-1670 METEOROLOGICAL AIDS FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY  722 736			1668.4-1670	METEOROLOG ICAL AIDS (Radiosonde) RADIO AS- TRONOMY  US74 US99 722 736	METEOROLOG ICAL AIDS (Radiosonde) RADIO AS- TRONOMY  US74 US99 722 736	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
1670-1675 METEOROLOGICAL AIDS FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE 740A  722			1670-1690	METEOROLOG ICAL AIDS (Radiosonde) METEOROLOG ICAL- SATELLITE (space- to-Earth)	METEOROLOG ICAL AIDS (Radiosonde) METEOROLOG ICAL- SATELLITE (space- to-Earth)	
				US211 722	US211 722	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
1675-1690 METEOROLOGICAL AIDS FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile  722	1675-1690 METEOROLOGICAL AIDS FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile MOBILE-SATELLITE (Earth-to-space)  722 735A	1675-1690 FIXED METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile  722				



TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
1690-1700 METEOROLOG ICAL AIDS METEOROLOG ICAL- SATELLITE (space- to-Earth) Fixed Mobile except aero- nautical mobile  671 722 741	1690-1700 METEOROLOG ICAL AIDS METEOROLOG ICAL-SAT- ELLITE (space- to-Earth) MOBILE- SATELLITE (Earth-to-space)  671 722 735A 740	1690-1700 METEOROLOG ICAL AIDS METEOROLOG ICAL SAT- ELLITE (space-to-Earth)  671 722 740 742	1690-1700	METEORO- LOGICAL AIDS (Radiosonde) METEORO- LOGICAL- SATELLITE (space- to-Earth)  671 722	METEORO- LOGICAL AIDS (Radiosonde) METEORO- LOGICAL- SATELLITE (space- to-Earth)  671 722	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
1700-1710 FIXED METEOROLOG ICAL- SATELLITE (space- to-Earth) MOBILE except aero- nautical mobile  671 722	1700-1710 FIXED METEOROLOG ICAL-SAT- ELLITE (space- to-Earth) MOBILE except aeronautical mobile MOBILE- SATELLITE (Earth-to-space) 671 722 735A	1700-1710 FIXED METEOROLOG ICAL- SATELLITE (space- to-Earth) MOBILE except aero- nautical mobile  671 722 743	1700-1710	FIXED METEORO- LOGICAL- SATELLITE (space- to-Earth)  671 722 G118	METEORO- LOGICAL- SATELLITE (space- to-Earth) Fixed  671 722	
1710-1930  FIXED MOBILE 740A 722 744 745 746 746A			1710-1850	FIXED MOBILE  US256 722 G42	  US256 722	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
1930-1970 FIXED MOBILE  764A	1930-1970 FIXED MOBILE Mobile-Satellite (Earth-to-space)  746A	1930-1970 FIXED MOBILE  746A	1850-1990	US331	FIXED MOBILE          US331	
1970-1980 FIXED MOBILE  746A	1970-1980 FIXED MOBILE MOBILE- SATELLITE (Earth-to-space)  746A 746B 746C	1970-1980 FIXED MOBILE  746A				
1980-2010  FIXED MOBILE MOBILE-SATELLITE (Earth-to-space)  746A 746B 746C			1990-2110	US90 US111 US219 US222	FIXED MOBILE       US90 US111 US219 US222 NG23 NG118	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
2010-2025 FIXED MOBILE  746A						
2025-2110 SPACE OPERATION (Earth-to-space)(space-to-space) EARTH EXPLORATION-SATELLITE (Earth-to-space)(space-to-space) FIXED MOBILE 747A SPACE RESEARCH (Earth-to-space)(space-to-space)  750A						

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
2110-2120 FIXED MOBILE SPACE RESEARCH (deep space) (Earth-to-space)  746A			2110-2150	US111 US252	FIXED MOBILE  US111 US252 NG23 NG153	
2120-2160 FIXED MOBILE  746A	2120-2160 FIXED MOBILE Mobile-Satellite (space-to-Earth) 746A	2120-2160 FIXED MOBILE  746A			FIXED  NG23	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
2160-2170 FIXED MOBILE  746A	2160-2170 FIXED MOBILE MOBILE- SATELLITE (space-to-Earth)  746A 746B 746C	2160-2170 FIXED MOBILE  746A	2160-2200		FIXED MOBILE	
2170-2200  FIXED MOBILE MOBILE-SATELLITE (space-to-Earth)  746A 746B 746C					NG23 NG153	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
2200-2290 SPACE OPERATION (space-to-Earth) (space-to-space) EARTH EXPLORATION-SATELLITE (space-to-Earth) (space-to- space) FIXED MOBILE 747A SPACE RESEARCH (space-to-Earth) (space-to-space)  750A			2200-2290	FIXED (LOS* only) MOBILE (LOS only including aeronautical telemetry, but excluding flight testing of manned aircraft) SPACE RESEARCH (space-to- Earth) (space- to-space) SPACE OPERATION (space-to- Earth) (space-to-space EARTH EXPLORATIO N-SATELLITE (space-to-	US303	* Line of sight.

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
2290-2300 FIXED MOBILE except aeronautical mobile SPACE RESEARCH (Deep Space) (space-to-Earth)			2290-2300	FIXED MOBILE except aeronautical mobile SPACE RESEARCH (space-to- Earth) (Deep Space only)	SPACE RESEARCH (space-to- Earth) (Deep Space only)	
2300-2450 FIXED MOBILE Amateur Radiolocation  664 751A 752	2300-2450 FIXED MOBILE RADIOLOCATION Amateur  664 750B 751 751B 752		2300-2310	G123	Amateur  US253	



TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
			2310-2360	Mobile Radiolocation Fixed  751B US276 US327 US328 G2 G120	BROADCASTI NG- SATELLITE Mobile  751B US276 US327 US328	
			2360-2390	MOBILE RADIOLOCATI ON Fixed  US276 G2 G120	MOBILE  US276	
			2390-2400	G122	AMATEUR	
			2400-2402	664 752 G123	Amateur 644 752	ISM 2450 ± 50 MHz
			2402-2417	664 752 G122	AMATEUR 664 752	ISM 2450 ± 50 MHz
			2417-2450	Radiolocation 664 752 G2 G124	Amateur 664 752	ISM 2450 ± 50 MHz

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
2450-2483.5 FIXED MOBILE Radiolocation  752 753	2450-2483.5 FIXED MOBILE RADIOLOCATION  751 752		2450-2483.5	US41 752	FIXED MOBILE Radiolocation  US41 752	ISM 2450 ± 50 MHz
2483.5-2500 FIXED MOBILE MOBILE- SATELLITE (space-to- Earth) Radiolocation  733F 752 753 753A 753B 753C 753F	2483.5-2500 FIXED MOBILE MOBILE- SATELLITE (space-to- Earth) RADIOETER MINATION- SATELLITE (space- to-Earth) 753A RADIOLOCATI ON  752 753D 753F	2483.5-2500 FIXED MOBILE MOBILE- SATELLITE (space-to- Earth) RADIOLOCATI ON Radiodetermin ation- Satellite (space- to-Earth) 753A  752 753C 753F	2483.5-2500	RADIOETER MINATION - SATELLITE (space-to- Earth) 753A MOBILE- SATELLITE (space-to- Earth)  US41 US319 752 753F	RADIOETER MINATION- SATELLITE (space- to-Earth) 753A MOBILE- SATELLITE (space-to- Earth)  US41 US319 752 753F NG147	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
2500-2520 FIXED 762 763 764 MOBILE except aero nautical mobile MOBILE- SATELLITE (space-to- Earth)  754 754B 755A 756 759 760A	2500-2520 FIXED 762 764 FIXED-SATELLITE (space-to- Earth) 761 MOBILE except aeronautical mobile MOBILE-SATELLITE (space-to- Earth)  754 754A 755 755A 760A		2500-2655	US205 US269 720	BROADCASTI NG- SATELLITE FIXED  US205 US269 720 NG47 NG101 NG102	

# TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
2520-2655 FIXED 762 763 764 MOBILE except aero- nautical mobile BROADCASTI NG- SATEL LITE 757 760  720 754 754B 756 757A 758 759	2520-2655 FIXED 762 764 FIXED- SATELLITE (space-to- Earth) 761 MOBILE except aero- nautical mobile BROADCASTI NG-SATEL LITE 757 760  720 754 755	2520-2535 FIXED 762 764 FIXED- SATELLITE (space-to- Earth) 761 MOBILE except aero nautical mobile BROADCASTI NG-SATEL LITE 757 760				
		754  2535-2655 FIXED 762 764 MOBILE except aero- nautical mobile BROADCASTI NG- SATEL LITE 757 760  720 757A				

# TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
2655-2670 FIXED 762 763 764 MOBILE except aero- nautical mobile BROADCASTI NG-SATEL LITE 757 760 Earth Exploration- Satellite (passive) Radio Astronomy Space Research (passive)  758 759 765 766	2655-2670 FIXED 762 764 FIXED- SATELLITE (Earth-to- space) (space-to- Earth) 761 MOBILE except aero- nautical mobile BROADCASTI NG-SATEL LITE 757 760 Earth Exploration- Satellite (passive) Radio Astronomy Space Research (passive)  765 766	2655-2670 FIXED 762 764 FIXED- SATELLITE (Earth-to- space) 761 MOBILE except aero- nautical mobile BROADCASTI NG-SATEL LITE 757 760 Earth Exploration- Satellite (passive) Radio Astronomy Space Research (passive)  765 766	2655-2690	Earth Explora- tion- Satellite (Passive) Radio As- tronomy Space Research (Passive)  US205 US269	BROADCASTI NG- SATELLITE FIXED Earth Explora- tion- Satellite (Passive) Radio As- tronomy Space Research (Passive)  US205 US269 NG47 NG101 NG102	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
2670-2690 FIXED 762 763 764 MOBILE except aero- nautical mobile MOBILE- SATELLITE (Earth-to- space) Earth Exploration- Satellite (passive) Radio Astronomy Space Research (passive)  764A 765 766	2670-2690 FIXED 762 764 FIXED- SATELLITE (Earth-to- space) 761 (space-to- Earth) MOBILE except aero nautical mobile MOBILE- SATELLITE (Earth-to- space) Earth Exploration- Satellite (passive) Radio Astronomy Space Research (passive)	2670-2690 FIXED 762 764 FIXED- SATELLITE (Earth-to- space) 761 MOBILE except aero nautical mobile MOBILE- SATELLITE (Earth-to- space) Earth Exploration- Satellite (passive) Radio Astronomy Space Research (passive)  764A 765 766				

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
2690-2700 EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)  767 768 769			2690-2700	EARTH EXPLORA- TION- SATELLITE (Passive) RADIO AS- TRONOMY SPACE RE- SEARCH (Passive)  US74 US246	EARTH EXPLORA- TION- SATELLITE (Passive) RADIO AS- TRONOMY SPACE RE- SEARCH (Passive)  US74 US246	
2700-2900 AERONAUTICAL RADIONAVIGATION 717 Radiolocation  770 771			2700-2900	AERONAUTIC AL  RADIONAVIG- ATION METEOROLOG ICAL AIDS Radiolocation  US18 717 770 G2 G15	US18 717 770	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
2900-3100 RADIONAVIGATION 773 Radiolocation 772 775A			2900-3100	MARITIME RADIONAVIGATION Radiolocation US44 US316 775A G56	MARITIME RADIONAVIGATION Radiolocation US44 US316 775A	
3100-3300 RADIOLOCATION 713 777 778			3100-3300	RADIOLOCATION US110 713 778 G59	Radiolocation US110 713 778	See Part 7.18 of the NTIA Manual.
3300-3400 RADIOLOCATION 778 779 780	3300-3400 RADIOLOCATION Amateur Fixed Mobile 778 780	3300-3400 RADIOLOCATION Amateur 778 779	3300-3500	RADIOLOCATION US108 664 778 G31	Amateur Radiolocation US108 664 778	



TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
3400-3600 FIXED FIXED-SATELLITE (space-to-Earth) Mobile Radiolocation	3400-3500 FIXED FIXED-SATELLITE (space-to-Earth) Amateur Mobile Radiolocation 784  664 783					
781 785	3500-3700 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile Radiolocation 784  786		3500-3600	AERONAUTICAL  RADIONAVIGATION (Ground-based) RADIOLOCATION  US110 G59 G110	Radiolocation  US110	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
3600-4200 FIXED FIXED- SATELLITE (space-to- Earth) Mobile			3600-3700	AERONAUTIC AL  RADIONAVIG ATION (Ground- based) RADIOLOCATI ON  US110 US245 G59 G110	FIXED- SATELLITE (space-to- Earth) Radiolocation  US110 US245	
	3700-4200 FIXED FIXED-SATELLITE (space- to-Earth) MOBILE except aeronautical mobile  787		3700-4200		FIXED FIXED-SAT- ELLITE (space-to- Earth)  NG41	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
4200-4400  AERONAUTICAL RADIONAVIGATION 789  788 790 791			4200-4400	AERONAUTIC AL  RADIONAVIG- ATION  US261 791	AERONAUTIC AL  RADIONAVIG- ATION  US261 791	
4400-4500  FIXED MOBILE			4400-4500	FIXED MOBILE		
4500-4800  FIXED FIXED-SATELLITE (space-to-Earth) 792A MOBILE			4500-4635	FIXED MOBILE  US245	FIXED- SATELLITE (space-to- Earth)  US245 792A	
			4635-4660	G125	FIXED- SATELLITE (Space-to- Earth)  US245	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
			4660-4685	G122	FIXED FIXED- SATELLITE (space-to- Earth) MOBILE US245 792A	
			4685-4800	FIXED MOBILE  US245	FIXED- SATELLITE (space-to- Earth)  US245 792A	
4800-4990  FIXED MOBILE 793 Radio Astronomy  720 778 794			4800-4990	FIXED MOBILE  US203 US257 720 778	US203 US257 720 778	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
4990-5000 FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY Space Research (passive) 795			4990-5000	RADIO AS- TRONOMY Space Research (Passive) US74 US246	RADIO AS- TRONOMY Space Research (Passive) US74 US246	
5000-5250 AERONAUTICAL RADIONAVIGATION 733 796 797 797A 797B			5000-5250	AERONAUTIC AL RADIONAVIG- ATION G126 US211 US260 US307 733 796 797 797A	AERONAUTIC AL RADIONAVIG- ATION US211 US260 US307 733 796 797 797A	
5250-5255 RADIOLOCATION Space Research 713 798			5250-5350	RADIOLOCA- TION US110 713 G59	Radiolocation US110 713	See Part 7.18 of the NTIA Manual.

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
5255-5350 RADIOLOCATION  713 798						
5350-5460 AERONAUTICAL RADIONAVIGATION 799 Radiolocation			5350-5460	AERONAUTIC AL  RADIONAVIG- ATION RADIOLOCA- TION  US48 799 G56	AERONAUTIC AL  RADIONAVIG- ATION Radiolocation  US48 799	
5460-5470 RADIONAVIGATION 799 Radiolocation			5460-5470	RADIONAVIG ATION Radiolocation  US49 US65 799 G56	RADIONAVIG ATION Radiolocation  US49 US65 799	See Part 7.18 of the NTIA Manual.

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
5470-5650  MARITIME RADIONAVIGATION Radiolocation  800 801 802			5470-5600	MARITIME  RADIONAVIGATION Radiolocation  US50 US65 G56	MARITIME  RADIONAVIGATION Radiolocation  US50 US65	
			5600-5650	MARITIME  RADIONAVIGATION METEOROLOGICAL AIDS Radiolocation  US51 US65 802 G56	MARITIME  RADIONAVIGATION METEOROLOGICAL AIDS Radiolocation  US51 US65 802	
5650-5725  RADIOLOCATION Amateur Space Research (deep space)  664 801 803 804 805			5650-5850	RADIOLOCATION  664 806 808 G2	Amateur  664 806 808	ISM 5800 ± 75 MHz

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
5725-5850 FIXED- SATELLITE (Earth-to- space) RADIOLOCATI ON Amateur  801 803 805 806 807 808	5725-5850 RADIOLOCATION Amateur  803 805 806 808					
5850-5925 FIXED FIXED- SATELLITE (Earth-to- space) MOBILE  806	5850-5925 FIXED FIXED- SATELLITE (Earth-to- space) MOBILE Amateur Radiolocation  806	5850-5925 FIXED FIXED- SATELLITE (Earth-to- space) MOBILE Radiolocation  806	5850-5925	RADIOLOCATI ON  US245 806 G2	FIXED- SATELLITE (Earth-to- space) Amateur  US245 806	



TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
5925-7075	FIXED FIXED-SATELLITE (Earth-to-space) 792A MOBILE  791 809		5925-6425		FIXED FIXED- SATELLITE (Earth-to- space)  NG41	
			6425-6525	791 809	FIXED- SATELLITE (Earth-to- space) MOBILE  791 809 NG122	
			6525-6875	809	FIXED FIXED- SATELLITE (Earth-to- space)  809	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
			6875-7075	809	FIXED FIXED- SATELLITE (Earth-to- space) MOBILE  809 NG118	
7075-7250  FIXED MOBILE  809 810 811			7075-7125	809	FIXED MOBILE  809 NG118	
			7125-7190	FIXED  US252 809 G116	US252 809	
			7190-7235	FIXED SPACE RESEARCH (Earth-to- space)  809	809	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
			7235-7250	FIXED  809	  809	
7250-7300  FIXED FIXED-SATELLITE (space-to-Earth) MOBILE  812			7250-7300	FIXED-SATEL- LITE (space-to- Earth) MOBILE- SATELLITE (space-to- Earth) Fixed  G117		

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
7300-7450 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile  812			7300-7450	FIXED FIXED-SATEL- LITE (space-to- Earth) Mobile- Satellite (space-to- Earth)  G117		

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
7450-7550 FIXED FIXED-SATELLITE (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile			7450-7550	FIXED FIXED-SATEL- LITE (space-to- Earth) METEOROLOG ICAL- SATELLITE (space- to-Earth) Mobile- Satellite (space-to- Earth)  G104 G117		

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
7550-7750 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile			7550-7750	FIXED FIXED-SATEL- LITE (space-to- Earth) Mobile- Satellite (space-to- Earth)  G117		
7750-7900 FIXED MOBILE except aeronautical mobile			7750-7900	FIXED		

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
7900-8025 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE  812			7900-8025	FIXED-SATEL- LITE (Earth-to- space) MOBILE- SATELLITE (Earth-to- space) Fixed  G117		

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
8025-8175 FIXED FIXED- SATELLITE (Earth-to- space) MOBILE Earth Exploration- Satellite (space- to-Earth) 813 815	8025-8175 EARTH EXPLORATIO N- SATELLITE (space- to-Earth) FIXED FIXED- SATELLITE (Earth-to- space) MOBILE 814	8025-8175 FIXED FIXED- SATELLITE (Earth-to- space) MOBILE Earth Exploration- Satellite (space- to-Earth) 813 815	8025-8175	EARTH EXPLORA- TION- SATELLITE (space- to-Earth) FIXED FIXED-SATEL- LITE (Earth-to- space) Mobile- Satellite (Earth-to- space) (No Airborne Transmission)  US258 G117	US258	



# TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
8175-8215 FIXED FIXED- SATELLITE (Earth-to- space) METEOROLOG ICAL- SATELLITE (Earth- to-space) MOBILE Earth Exploration- Satellite (space- to-Earth) 813 815	8175-8215 EARTH EXPLORATIO N- SATELLITE (space- to-Earth) FIXED FIXED- SATELLITE (Earth-to- space) METEOROLOG ICAL- SATELLITE (Earth- to-space) MOBILE 814	8175-8215 FIXED FIXED- SATELLITE (Earth-to- space) METEOROLOG ICAL- SATELLITE (Earth- to-space) MOBILE Earth Exploration- Satellite (space- to-Earth) 813 815	8175-8215	EARTH EXPLORA- TION- SATELLITE (space- to-Earth) FIXED FIXED-SATEL- LITE (Earth-to- space) METEOROLOG ICAL- SATELLITE (Earth- to-space) Mobile- Satellite (Earth-to- space) (No Airborne Transmissions)  US258 G104	US258	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
8215-8400 FIXED FIXED- SATELLITE (Earth-to- space) MOBILE Earth Exploration- Satellite (space- to-Earth) 813 815	8215-8400 EARTH EXPLORATIO N- SATELLITE (space- to-Earth) FIXED FIXED- SATELLITE (Earth-to- space) MOBILE 814	8215-8400 FIXED FIXED- SATELLITE (Earth-to- space) MOBILE Earth Exploration- Satellite (space- to-Earth) 813 815	8215-8400	EARTH EXPLORA- TION- SATELLITE (space- to-Earth) FIXED FIXED-SATEL- LITE (Earth-to- space) Mobile- Satellite (Earth-to- space) (No Airborne Transmissions)  US258 G117	US258	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
8400-8500  FIXED MOBILE except aeronautical mobile SPACE RESEARCH (space-to-Earth) 816 817  818			8400-8450	FIXED SPACE RESEARCH (space-to- Earth) (Deep Space only)		
			8450-8500	FIXED SPACE RESEARCH (space-to- Earth)	SPACE RESEARCH (space-to- Earth)	
8500-8750  RADIOLOCATION  713 819 820			8500-9000	RADIOLOCA- TION  US53 US110 713 G59	Radiolocation  US53 US110 713	See Part 7.18 of the NTIA Manual.
8750-8850  RADIOLOCATION AERONAUTICAL RADIONAVIGATION 821  822						

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
8850-9000 RADIOLOCATION MARITIME RADIONAVIGATION 823  824						
9000-9200 AERONAUTICAL RADIONAVIGATION 717 Radiolocation  822			9000-9200	AERONAUTIC AL  RADIONAVIG- ATION Radiolocation  US48 US54 717 G2 G19	AERONAUTIC AL  RADIONAVIG- ATION Radiolocation  US48 US54 717	See Part 7.18 of the NTIA Manual.
9200-9300 RADIOLOCATION MARITIME RADIONAVIGATION 823  824 824A			9200-9300	MARITIME  RADIONAVIG- ATION Radiolocation  US110 823 824A G59	MARITIME  RADIONAVIG- ATION Radiolocation  US110 823 824A	See Part 7.18 of the NTIA Manual.

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
9300-9500 RADIONAVIGATION 825A Radiolocation 775A 824A 825			9300-9500	RADIONAVIG ATION Meteorological Aids Radiolocation  US51 US66 US67 US71 775A 824A 825A G56	RADIONAVIG ATION Meteorological Aids Radiolocation  US51 US66 US67 US71 775A 824A 825A	See Part 7.18 of the NTIA Manual.
9500-9800 RADIOLOCATION RADIONAVIGATION  713			9500-10000	RADIOLOCA- TION  US110 713 828	Radiolocation  US110 713 828	See Part 7.18 of the NTIA Manual.
9800-10000 RADIOLOCATION Fixed  826 827 828						

INTERNATIONAL			UNITED STATES			
Region 1 MHz	Region 2 MHz	Region 3 MHz	Band MHz	Government Allocation	Non- Government Allocation	Remarks
9300-9500 RADIONAVIGATION 825A Radiolocation 775A 824A 825			9300-9500	RADIONAVIGATION Meteorological Aids Radiolocation	RADIONAVIGATION Meteorological Aids Radiolocation	See Part 7.18 of the NTIA Manual.
				US51 US66 US67 US71 775A 824A 825A G56	US51 US66 US67 US71 775A 824A 825A	
9500-9800 RADIOLOCATION RADIONAVIGATION 713			9500-10000	RADIOLOCATION US110 713 828	Radiolocation US110 713 828	See Part 7.18 of the NTIA Manual.
9800-10000 RADIOLOCATION Fixed 826 827 828						

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
10-10.45 FIXED MOBILE RADIOLOCATI ON Amateur  828	10-10.45 RADIOLOCATI ON Amateur  828 829	10-10.45 FIXED MOBILE RADIOLOCATI ON Amateur  828	10-10.45	RADIOLOCA- TION   US58 US108 828 G32	Amateur Radiolocation  US58 US108 828 NG42	
10.45-10.5  RADIOLOCATION Amateur Amateur-Satellite  830			10.45-10.5	RADIOLOCA- TION   US58 US108 G32	RADIOLOCA- TION Amateur Amateur-Satel- lite  US58 US108 NG42 NG134	
10.5-10.55 FIXED MOBILE Radiolocation	10.5-10.55  FIXED MOBILE RADIOLOCATION		10.5-10.55	RADIOLOCA- TION  US59	RADIOLOCATI ON  US59	
10.55-10.6  FIXED MOBILE except aeronautical mobile Radiolocation			10.55-10.6		FIXED	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
10.6-10.68  EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY SPACE RESEARCH (passive) Radiolocation  831 832			10.6-10.68	EARTH EXPLO- RATION- SATELLITE (Passive) SPACE RE- SEARCH (Passive)  US265 US277	EARTH EXPLO- RATION- SATELLITE (Passive) FIXED SPACE RE- SEARCH (Passive)  US265 US277	
10.68-10.7  EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)  833 834			10.68-10.7	EARTH EXPLO- RATION- SATELLITE (Passive) RADIO AS- TRONOMY SPACE RE- SEARCH (Passive)  US74 US246	EARTH EXPLO- RATION- SATELLITE (Passive) RADIO AS- TRONOMY SPACE RE- SEARCH (Passive)  US74 US246	

# TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
10.7-11.7 FIXED FIXED- SATELLITE (space-to- Earth) (Earth-to- space) 792A 835 MOBILE except aero- nautical mobile	10.7-11.7 FIXED FIXED-SATELLITE (space- to-Earth) 792A MOBILE except aeronautical mobile		10.7-11.7	US211	FIXED FIXED- SATELLITE (space-to- Earth)  792A US211 NG41 NG104	
11.7-12.5 FIXED BROADCASTI NG BROADCASTI NG- SATELLITE Mobile except aero- nautical mobile	11.7-12.1 FIXED 837 FIXED- SATELLITE (space-to- Earth) Mobile except aero- nautical mobile  836 839	11.7-12.2 FIXED MOBILE except aero- nautical mobile BROADCASTIN G BROADCASTIN G- SATELLITE	11.7-12.2	837 839	FIXED- SATELLITE (space-to- Earth) Mobile except aero- nautical mobile  837 839 NG143 NG145	

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## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
	12.1-12.2 FIXED- SATELLITE (space-to- Earth)  836 839 842					
	12.2-12.7 FIXED MOBILE except aero- nautical mobile BROADCASTI NG BROADCASTI NG- SATELLITE  839 844 846	12.2-12.5 FIXED MOBILE except aero- nautical mobile BROADCASTIN G  838 845	12.2-12.7	839 843 844	FIXED BROADCASTI NG- SATELLITE  839 843 844 NG139	

# TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
12.5-12.75 FIXED- SATELLITE (space-to- Earth) (Earth-to- space)  848 849 850		12.5-12.75 FIXED FIXED- SATELLITE (space-to-Earth) MOBILE except				
	12.7-12.75 FIXED FIXED- SATELLITE (Earth-to- space) MOBILE except aero- nautical mobile	aero- nautical mobile BROADCASTIN G- SATELLITE 847	12.7-12.75		FIXED FIXED- SATELLITE (Earth-to- space) MOBILE  NG53 NG118	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
12.75-13.25 FIXED FIXED-SATELLITE (Earth-to-space) 792A MOBILE Space Research (deep space) (space-to-Earth)			12.75-13.25	US251	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE  792A US251 NG53 NG104 NG118	
13.25-13.4 AERONAUTICAL RADIONAVIGATION 851  852 853			13.25-13.4	AERONAUTICAL RADIONAVIGATION Space Research (Earth-to-space)  851	AERONAUTICAL RADIONAVIGATION Space Research (Earth-to-space)  851	

# TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
13.4-13.75  RADIOLOCATION Standard Frequency and Time Signal-Satellite (Earth-to-space) Space Research  713 853 854 855			13.4-14	RADIOLOCA- TION Space Research Standard Frequency and Time Signal- Satellite (Earth- to-space)	Radiolocation Space Research Standard Frequency and Time Signal- Satellite (Earth- to-space)	See Part 7.18 of the NTIA Manual.
13.75-14  FIXED-SATELLITE (Earth-to-space) RADIOLOCATION Standard Frequency and Time Signal-Satellite (Earth-to-space) 713 853 854 855 855A 855B				US110 713 G59	US110 713	
14-14.25  FIXED-SATELLITE (Earth-to-space) 858 RADIONAVIGATION 856 Space Research  857 859			14-14.2	RADIONAVIG ATION Space Research  US287 US292	FIXED- SATELLITE (Earth-to- space) RADIONAVIG ATION Space Research  US287 US292	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
			14.2-14.3	US287	FIXED- SATELLITE (Earth-to- space)  US287	
14.25-14.3  FIXED-SATELLITE (Earth-to-space) 858 RADIONAVIGATION 856 Space Research  857 859 860 861						
14.3-14.4 FIXED FIXED- SATELLITE (Earth-to- space) 858 MOBILE except aero- nautical mobile Radionavigatio n- Satellite  859	14.3-14.4 FIXED- SATELLITE (Earth-to- space) 858 Radionavigatio n- Satellite  859	14.3-14.4 FIXED FIXED- SATELLITE (Earth-to-space) 858 MOBILE except aero- nautical mobile Radionavigatio n- Satellite  859	14.3-14.4	US287	FIXED- SATELLITE (Earth-to- space)  US287	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
14.4-14.47  FIXED FIXED-SATELLITE (Earth-to-space) 858 MOBILE except aeronautical mobile Space Research (space-to-Earth)  859			14.4-14.5	Fixed Mobile  US203 US287 862	FIXED- SATELLITE (Earth-to- space)  US203 US287 862	
14.47-14.5						
FIXED FIXED-SATELLITE (Earth-to-space) 858 MOBILE except aeronautical mobile Radio Astronomy  859 862						
14.5-14.8			14.5- 14.7145	FIXED Mobile Space Research		
FIXED FIXED-SATELLITE (Earth-to-space) 863 MOBILE Space Research						

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
14.8-15.35 FIXED MOBILE Space Research  720			14.7145- 15.1365	MOBILE Fixed Space Research  US310	US310	
			15.1365- 15.35	FIXED Mobile Space Research  US211 720	US211 720	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
15.35-15.4  EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)  864 865			15.35-15.4	EARTH EXPLO- RATION- SATELLITE (Passive) RADIO AS- TRONOMY SPACE RE- SEARCH (Passive)  US74 US246	EARTH EXPLO- RATION- SATELLITE (Passive) RADIO AS- TRONOMY SPACE RE- SEARCH (Passive)  US74 US246	
15.4-15.7  AERONAUTICAL RADIONAVIGATION  733 797			15.4-15.7	AERONAUTIC AL  RADIONAVIG- ATION  US211 US260 733 797	AERONAUTIC AL  RADIONAVIG- ATION  US211 US260 733 797	
15.7-16.6  RADIOLOCATION  866 867			15.7-16.6	RADIOLOCA- TION  US110 G59	Radiolocation  US110	See Part 7.18 and Section 8.2.46 of the NTIA Manual.



## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
16.6-17.1  RADIOLOCATION Space Research (deep space)(Earth-to-space)  866 867			16.6-17.1	RADIOLOCA- TION Space Research (Deep Space) (Earth-to-space)  US110 G59	Radiolocation   US110	See Part 7.18 and Section 8.2.46 of the NTIA Manual.
17.1-17.2  RADIOLOCATION  866 867			17.1-17.2	RADIOLOCA- TION  US110 G59	Radiolocation  US110	See Part 7.18 and Section 8.2.46 of the NTIA Manual.
17.2-17.3  RADIOLOCATION Earth Exploration-Satellite (active) Space Research (active)  866 867			17.2-17.3	RADIOLOCA- TION Earth Explo- ration- Satellite (Active) Space Research (Active)  US110 G59	Earth Explo- ration- Satellite (Active) Radiolocation Space Research (Active)  US110	See Part 7.18 and Section 8.2.46 of the NTIA Manual.

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
17.3-17.7 FIXED- SATELLITE (Earth-to-space) 869 Radiolocation  868	17.3-17.7 FIXED- SATELLITE (Earth-to- space) 869 BROADCASTI NG-SATEL- LITE Radiolocation  868 868A 869A	17.3-17.7 FIXED- SATELLITE (Earth-to-space) 869 Radiolocation  868	17.3-17.7	Radiolocation  US259 US271 G59	FIXED- SATELLITE (Earth-to- space)  US259 US271 NG140	See Part 7.18 of the NTIA Manual.

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
17.7-18.1 FIXED FIXED- SATELLITE (space-to-Earth) (Earth-to-space) 869 MOBILE	17.7-17.8 FIXED FIXED- SATELLITE (space-to- Earth) (Earth-to- space) 869 BROADCASTI NG-SATEL LITE Mobile 869B  868A 869A	17.7-18.1 FIXED FIXED- SATELLITE (space-to-Earth) (Earth-to-space) 869 MOBILE	17.7-17.8	US271	FIXED FIXED- SATELLITE (space-to- Earth) (Earth-to- space) MOBILE  US271 NG140 NG144	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
	17.8-18.1 FIXED FIXED- SATELLITE (space-to- Earth) (Earth-to- space) 869 MOBILE		17.8-18.1	US334 G117	FIXED FIXED- SATELLITE (space-to- Earth) MOBILE  US334 NG144	
18.1-18.4  FIXED FIXED-SATELLITE (space-to-Earth) (Earth-to-space) 870A MOBILE  870 870B			18.1-18.6	870 US334 G117	FIXED FIXED- SATELLITE (Space-to- Earth) MOBILE  870 US334 NG144	
18.4-18.6  FIXED FIXED-SATELLITE (space-to-Earth) MOBILE						

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
18.6-18.8 FIXED FIXED- SATELLITE (space-to- Earth) 872 MOBILE except aero- nautical mobile Earth Exploration- Satellite (passive) Space Research (passive)  871	18.6-18.8 EARTH EXPLORATIO N- SATELLITE (passive) FIXED FIXED- SATELLITE (space-to- Earth) 872 MOBILE except aero- nautical mobile SPACE RESEARCH (passive)  871	18.6-18.8 FIXED FIXED- SATELLITE (space-to-Earth) 872 MOBILE except aero- nautical mobile Earth Exploration- Satellite (passive) Space Research (passive)  871	18.6-18.8	EARTH EXPLO- RATION- SATELLITE (passive) SPACE RE- SEARCH (passive)      US254 US255 US334 G117	FIXED FIXED- SATELLITE (space-to- Earth) EARTH EXPLORATIO N- SATELLITE (Passive) MOBILE except aero- nautical mobile SPACE RESEARCH (Passive)  US254 US255 US334 NG144	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
18.8-19.7  FIXED FIXED-SATELLITE (space-to-Earth) MOBILE			18.8-19.7	US334 G117	FIXED FIXED-SATEL- LITE (space-to- Earth) MOBILE  US334 NG144	
19.7-20.1 FIXED-SAT- ELLITE (space-to-Earth) Mobile-Satellite (space-to- Earth)  873	19.7-20.1 FIXED-SAT- ELLITE (space-to-Earth) MOBILE- SATELLITE (space-to-Earth)  873 873A 873B 873C 873D 873E	19.7-20.1 FIXED-SAT- ELLITE (space- to-Earth) Mobile-Satellite (space-to-Earth)  873	19.7-20.1	US334 G117	FIXED-SATEL- LITE (space-to- Earth) MOBILE- SATELLITE (space-to- Earth)  873A 873B 873C 873D 873E US334	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
20.1-20.2  FIXED-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth)  873 873A 873B 873C 873D			20.1-20.2	US334 G117	FIXED-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth)  873A 873B 873C 873D US334	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
20.2-21.2	FIXED-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) Standard Frequency and Time Signal- Satellite (space-to-Earth)  873		20.2-21.2	FIXED-SATEL- LITE (space-to- Earth) MOBILE-SAT- ELLITE (space-to- Earth) Standard Frequency and Time Signal- Satellite (space- to-Earth)  G117	Standard Frequency and Time Signal- Satellite (space- to-Earth)	



TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
21.2-21.4 EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive)			21.2-21.4	EARTH EXPLO- RATION- SATELLITE (passive) FIXED MOBILE SPACE RE- SEARCH (passive)  US263	EARTH EXPLO- RATION- SATELLITE (passive) FIXED MOBILE SPACE RE- SEARCH (passive)  US263	
21.4-22 FIXED MOBILE BROADCASTI NG-SATEL LITE  873F	21.4-22 FIXED MOBILE	21.4-22 FIXED MOBILE BROADCASTIN G-SATEL LITE  873F 873G	21.4-22	FIXED MOBILE	FIXED MOBILE	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
22-22.21	FIXED MOBILE except aeronautical mobile  874		22-22.21	FIXED MOBILE ex- cept aero- nautical mobile  874	FIXED MOBILE ex- cept aero- nautical mobile  874	
22.21-22.5	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY SPACE RESEARCH (passive)  875 876		22.21-22.5	EARTH EXPLO- RATION- SATELLITE (passive) FIXED MOBILE ex- cept aero- nautical mobile RADIO AS- TRONOMY SPACE RE- SEARCH (passive)  US263 875	EARTH EXPLO- RATION- SATELLITE (passive) FIXED MOBILE ex- cept aero- nautical mobile RADIO AS- TRONOMY SPACE RE- SEARCH (passive)  US263 875	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
22.5-22.55 FIXED MOBILE			22.5-22.55	FIXED MOBILE  US211	FIXED MOBILE  US211	
22.55-23 FIXED INTER-SATELLITE MOBILE  879			22.55-23	FIXED INTER-SAT- ELLITE MOBILE  US278 879	FIXED INTER- SATELLITE MOBILE  US278 879	
23-23.55 FIXED INTER-SATELLITE MOBILE  879			23-23.55	FIXED INTER-SATEL- LITE MOBILE  US278 879	FIXED INTER-SATEL- LITE MOBILE  US278 879	
23.55-23.6 FIXED MOBILE			23.55-23.6	FIXED MOBILE	FIXED MOBILE	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
23.6-24	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)  880		23.6-24	EARTH EXPLO- RATION- SATELLITE (passive) RADIO AS- TRONOMY SPACE RE- SEARCH (passive)  US74 US246	EARTH EXPLO- RATION- SATELLITE (passive) RADIO AS- TRONOMY SPACE RE- SEARCH (passive)  US74 US246	
24-24.05	AMATEUR AMATEUR-SATELLITE  881		24-24.05	US211 881	AMATEUR AMATEUR- SATELLITE  US211 881	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
24.05-24.25 RADIOLOCATION Amateur Earth Exploration-Satellite (active)  881			24.05- 24.25	RADIOLOCA- TION Earth Explo- ration- Satellite (active)  US110 881 G59	Amateur Earth Exploration- Satellite (active) Radiolocation  US110 881	ISM 24.125 ± 125 MHz
24.25-24.45 FIXED	24.25-24.45 RADIONAVIG ATION	24.25-24.45 RADIONAVIGA TION FIXED MOBILE	24.25- 24.45	RADIONAVIG ATION	RADIONAVIG ATION	
24.45-24.65 FIXED INTER- SATELLITE	24.45-24.65 INTER- SATELLITE RADIONAVIG ATION  882E	24.45-24.65 FIXED INTER- SATELLITE MOBILE RADIONAVIGA TION  882E	24.45- 24.65	INTER- SATELLITE RADIONAVIG ATION  882E	INTER- SATELLITE RADIONAVIG ATION  882E	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
24.65-24.75 FIXED INTER- SATELLITE	24.65-24.75 INTER- SATELLITE RADIOLOCATI ON-SAT ELLITE (Earth- to- space)	24.65-24.75 FIXED INTER- SATELLITE MOBILE  882E 882F	24.65- 24.75	INTER- SATELLITE RADIOLOCATI ON-SAT- ELLITE (Earth- to-space)	INTER- SATELLITE RADIOLOCATI ON-SAT- ELLITE (Earth- to-space)	
24.75-25.25 FIXED	24.75-25.25 FIXED- SATELLITE (Earth-to- space) 882G	24.75-25.25 FIXED FIXED- SATELLITE (Earth-to-space) 882G MOBILE 882F	24.75- 25.25	RADIONAVIG ATION	RADIONAVIG ATION	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
25.25-25.5  FIXED INTER-SATELLITE 881A MOBILE Standard Frequency and Time Signal- Satellite (Earth-to-space)			25.25-25.5	FIXED INTER- SATELLITE MOBILE Standard Frequency and Time Signal- Satellite (Earth- to-space)  881A	Earth Explo- ration- Satellite (space- to-space) Standard Frequency and Time Signal- Satellite (Earth- to-space)	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
25.5-27	FIXED INTER-SATELLITE 881A MOBILE Earth Exploration-Satellite (space-to-Earth) Standard Frequency and Time Signal-Satellite (Earth-to-space)		25.5-27	FIXED INTER-SATELLITE MOBILE Earth Exploration-Satellite (space-to-Earth) Standard Frequency and Time Signal-Satellite (Earth-to-space)  881A	Earth Exploration-Satellite (space-to-space) Standard Frequency and Time Signal-Satellite (Earth-to-space)	



TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
27-27.5 FIXED INTER- SATELLITE 881A MOBILE	27-27.5 FIXED FIXED-SATELLITE (Earth- to-space) INTER-SATELLITE 881A 881B MOBILE		27-27.5	FIXED INTER- SATELLITE MOBILE  881A	Earth Explo- ration- Satellite (space- to-space)	
27.5-28.5  FIXED FIXED-SATELLITE (Earth-to-space) 882D MOBILE  882A 882B			27.5-29.5		FIXED FIXED-SATEL- LITE (Earth-to- space) MOBILE	
28.5-29.5  FIXED FIXED-SATELLITE (Earth-to-space) 882D MOBILE Earth Exploration-Satellite (Earth-to- space) 882C  882B						

# TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
29.5-29.9 FIXED-SAT- ELLITE (Earth-to- space) 882D Earth Exploration- Satellite (Earth- to-space) 882C Mobile-Satellite (Earth-to- space)  882B 883	29.5-29.9 FIXED- SATELLITE (Earth-to- space) 882D MOBILE- SATELLITE (Earth-to- space) Earth Exploration- Satellite (Earth- to-space) 882C  873A 873B 873C 873E 882B 883	29.5-29.9 FIXED- SATELLITE (Earth-to-space) 882D Earth Exploration- Satellite (Earth- to- space) 882C Mobile-Satellite (Earth-to-space)  882B 883	29.5-30	882	FIXED-SATEL- LITE (Earth-to- space) Mobile-Sat- ellite (Earth-to- space)  882	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
29.9-30	FIXED-SATELLITE (Earth-to-space) 882D MOBILE-SATELLITE (Earth-to-space) Earth Exploration-Satellite (Earth-to-space) 882C					
	873A 873B 873C 882 882A 882B 883					

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
30-31	FIXED-SATELLITE (Earth-to-space) MOBILE-SATELLITE (Earth-to-space) Standard Frequency and Time Signal- Satellite (space-to-Earth)  883		30-31	FIXED-SATEL- LITE (Earth-to- space) MOBILE-SAT- ELLITE (Earth-to- space) Standard Frequency and Time Signal- Satellite (space- to-Earth)  G117	Standard Frequency and Time Signal- Satellite (space- to-Earth)	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
31-31.3	FIXED MOBILE Standard Frequency and Time Signal- Satellite (space-to-Earth) Space Research 884  885 886		31-31.3	Standard Frequency and Time Signal- Satellite (space- to-Earth)  US211 886	FIXED MOBILE Standard Frequency and Time Signal- Satellite (space- to-Earth)  US211 886	
31.3-31.5	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)  887		31.3-31.8	EARTH EXPLO- RATION- SATELLITE (passive) RADIO AS- TRONOMY SPACE RE- SEARCH (passive)  US74 US246	EARTH EXPLO- RATION- SATELLITE (Passive) RADIO AS- TRONOMY SPACE RE- SEARCH (Passive)  US74 US246	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
31.5-31.8 EARTH EXPLORATIO N- SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) Fixed Mobile except aero- nautical mobile  888 889	31.5-31.8 EARTH EXPLORATIO N- SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 888	31.5-31.8 EARTH EXPLORATION- SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) Fixed Mobile except aero- nautical mobile  888				
31.8-32  RADIONAVIGATION SPACE RESEARCH (deep space) (space- to-Earth)  892 893			31.8-32	RADIONAVIG ATION  US69 US211 US262	RADIONAVIG ATION  US69 US211 US262	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
32-32.3  INTER-SATELLITE RADIONAVIGATION SPACE RESEARCH (deep space) (space- to-Earth)  892 893			32-33	INTER-SATEL- LITE RADIONAVIG ATION  US69 US262 US278 893	INTER-SATEL- LITE RADIONAVIG ATION  US69 US262 US278 893	
32.3-33  INTER-SATELLITE RADIONAVIGATION  892 893						
33-33.4  RADIONAVIGATION  892			33-33.4	RADIONAVIG ATION  US69	RADIONAVIG ATION  US69	
33.4-34.2  RADIOLOCATION  892 894			33.4-36	RADIOLOCA- TION  US110 US252 897 G34	Radiolocation  US110 US252 897	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
34.2-34.7	RADIOLOCATION SPACE RESEARCH (deep space) (Earth- to-space)					
	894					
34.7-35.2	RADIOLOCATION Space Research 896					
	894					
35.2-36	METEOROLOGICAL AIDS RADIOLOCATION					
	894 897					



TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
36-37	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive)  898		36-37	EARTH EXPLO- RATION- SATELLITE (passive) FIXED MOBILE SPACE RE- SEARCH (passive)  US263 898	EARTH EXPLO- RATION- SATELLITE (passive) FIXED MOBILE SPACE RE- SEARCH (passive)  US263 898	
37-37.5	FIXED MOBILE SPACE RESEARCH (space-to-Earth)		37-38.6	FIXED MOBILE	FIXED MOBILE	
37.5-38	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE SPACE RESEARCH (space-to-Earth) Earth Exploration-Satellite (space-to-Earth)					

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
38-39.5  FIXED FIXED-SATELLITE (space-to-Earth) MOBILE Earth exploration-Satellite (space-to-Earth)						
			38.6-39.5	US291	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE  US291	
39.5-40  FIXED FIXED-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth) Earth Exploration-Satellite (space-to-Earth)			39.5-40	FIXED-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth)  US291 G117	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth)  US291	

# TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
40-40.5	EARTH EXPLORATION-SATELLITE (Earth-to-space) FIXED FIXED-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth) SPACE RESEARCH (Earth-to-space) Earth Exploration-Satellite (space-to-Earth)		40-40.5	FIXED-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth)  G117	FIXED-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth)	
40.5-42.5	BROADCASTING-SATELLITE /BROADCASTING/ Fixed Mobile		40.5-42.5	US211	BROADCASTING-SATELLITE /BROADCASTING/ Fixed Mobile  US211	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
42.5-43.5	FIXED FIXED-SATELLITE (Earth-to-space) 901 MOBILE except aeronautical mobile RADIO ASTRONOMY  900		42.5-43.5	FIXED FIXED-SATEL- LITE (Earth-to- space) MOBILE ex- cept aero- nautical mobile RADIO AS- TRONOMY  900	FIXED FIXED-SATEL- LITE (Earth-to- space) MOBILE ex- cept aero- nautical mobile RADIO AS- TRONOMY  900	
43.5-47	MOBILE 902 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE  903		43.5-45.5	FIXED- SATELLITE (Earth-to- space) MOBILE- SATELLITE (Earth-to- space)  G117		

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
			45.5-47	MOBILE MOBILE- SATELLITE (Earth-to- space) RADIONAVIG ATION- SATELLITE  903	MOBILE MOBILE- SATELLITE (Earth-to- space) RADIONAVIG ATION- SATELLITE  903	
47-47.2	AMATEUR AMATEUR-SATELLITE		47-47.2		AMATEUR AMATEUR- SATELLITE	
47.2-50.2	FIXED FIXED-SATELLITE (Earth-to-space) 901 MOBILE 905  904		47.2-50.2	FIXED FIXED-SATEL- LITE (Earth-to- space) MOBILE  US264 US297 904	FIXED FIXED-SATEL- LITE (Earth-to- space) MOBILE  US264 US297 904	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
50.2-50.4  EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive)			50.2-50.4	EARTH EXPLO- RATION- SATELLITE (passive) FIXED MOBILE SPACE RE- SEARCH (passive)  US263	EARTH EXPLO- RATION- SATELLITE (passive) FIXED MOBILE SPACE RE- SEARCH (passive)  US263	
50.4-51.4  FIXED FIXED-SATELLITE (Earth-to-space) MOBILE Mobile-Satellite (Earth-to-space)			50.4-51.4	FIXED FIXED-SATEL- LITE (Earth-to- space) MOBILE MOBILE-SAT- ELLITE (Earth-to- space)  G117	FIXED FIXED-SATEL- LITE (Earth-to- space) MOBILE MOBILE-SAT- ELLITE (Earth-to- space)	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
51.4-54.25 EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive)  906 907			51.4-54.25	EARTH EXPLO- RATION- SATELLITE (passive) RADIO ASTRONOMY SPACE RE- SEARCH (passive)  US246	EARTH EXPLO- RATION- SATELLITE (passive) RADIO ASTRONOMY SPACE RE- SEARCH (passive)  US246	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
54.25-58.2	EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE MOBILE 909 SPACE RESEARCH (passive)  908		54.25-58.2	EARTH EXPLO- RATION- SATELLITE (passive) FIXED INTER-SATEL- LITE MOBILE SPACE RE- SEARCH (passive)  US263 909	EARTH EXPLO- RATION- SATELLITE (passive) FIXED INTER-SATEL- LITE MOBILE SPACE RE- SEARCH (passive)  US263 909	



TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
58.2-59	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive)  906 907		58.2-59	EARTH EXPLO- RATION- SATELLITE (passive) RADIO ASTRONOMY SPACE RE- SEARCH (passive)  US246	EARTH EXPLO- RATION- SATELLITE (passive) RADIO ASTRONOMY SPACE RE- SEARCH (passive)  US246	
59-64	FIXED INTER-SATELLITE MOBILE 909 RADIOLOCATION 910  911		59-64	FIXED INTER-SATEL- LITE MOBILE RADIOLOCAT- ION  909 910 911	FIXED INTER-SATEL- LITE MOBILE RADIOLOCAT- ION  909 910 911	ISM 61.25 ± 250 MHz

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
64-65	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive)  906 907		64-65	EARTH EXPLO- RATION- SATELLITE (passive) RADIO ASTRONOMY SPACE RE- SEARCH (passive)  US246	EARTH EXPLO- RATION- SATELLITE (passive) RADIO ASTRONOMY SPACE RE- SEARCH (passive)  US246	
65-66	EARTH EXPLORATION-SATELLITE SPACE RESEARCH Fixed Mobile		65-66	EARTH EXPLO- RATION- SATELLITE SPACE RE- SEARCH Fixed Mobile	EARTH EXPLO- RATION- SATELLITE SPACE RE- SEARCH Fixed Mobile	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
66-71	MOBILE 902 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE  903		66-71	MOBILE MOBILE-SAT- ELLITE RADIONAVIG ATION RADIONAVIG ATION- SATELLITE  903	MOBILE MOBILE-SAT- ELLITE RADIONAVIG ATION RADIONAVIG ATION- SATELLITE  903	
71-74	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE MOBILE-SATELLITE (Earth-to-space)  906		71-74	FIXED FIXED-SATEL- LITE (Earth-to- space) MOBILE MOBILE-SAT- ELLITE (Earth-to- space)  US270	FIXED FIXED-SATEL- LITE (Earth-to- space) MOBILE MOBILE-SAT- ELLITE (Earth-to- space)  US270	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
74-75.5  FIXED FIXED-SATELLITE (Earth-to-space) MOBILE Space Research (space-to-Earth)			74-75.5	FIXED FIXED-SATEL- LITE (Earth-to- space) MOBILE  US297	FIXED FIXED-SATEL- LITE (Earth-to- space) MOBILE  US297	
75.5-76  AMATEUR AMATEUR-SATELLITE Space Research (space-to-Earth)			75.5-76		AMATEUR AMATEUR- SATELLITE	
76-81  RADIOLOCATION Amateur Amateur-Satellite Space Research (space-to-Earth)  912			76-77	RADIOLOCA- TION	RADIOLOCATI ON Amateur	
			77-81	912	RADIOLOCATI ON Amateur Amateur- Satellite  912	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
81-84	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth) Space Research (space-to-Earth)		81-84	FIXED FIXED-SATEL- LITE (space-to- Earth) MOBILE MOBILE-SAT- ELLITE (space-to- Earth)	FIXED FIXED-SATEL- LITE (space-to- Earth) MOBILE MOBILE-SAT- ELLITE (space-to- Earth)	
84-86	FIXED MOBILE BROADCASTING BROADCASTING-SATELLITE  913		84-86	FIXED MOBILE   US211 913	BROADCASTI NG BROADCASTI NG- SATELLITE FIXED MOBILE  US211 913	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
86-92	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)  907		86-92	EARTH EXPLO- RATION- SATELLITE (passive) RADIO AS- TRONOMY SPACE RE- SEARCH (passive)  US74 US246	EARTH EXPLO- RATION- SATELLITE (passive) RADIO AS- TRONOMY SPACE RE- SEARCH (passive)  US74 US246	
92-95	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE RADIOLOCATION  914		92-95	FIXED FIXED-SATEL- LITE (Earth-to- space) MOBILE RADIOLOCA- TION  914	FIXED FIXED-SATEL- LITE (Earth-to- space) MOBILE RADIOLOCA- TION  914	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
95-100	MOBILE 902 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE Radiolocation  903 904		95-100	MOBILE MOBILE-SAT- ELLITE RADIONAVIG ATION RADIONAVIG ATION- SATELLITE Radiolocation  902 903 904	MOBILE MOBILE-SAT- ELLITE RADIONAVIG ATION RADIONAVIG ATION- SATELLITE Radiolocation  902 903 904	
100-102	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive)  722		100-102	EARTH EXPLO- RATION- SATELLITE (passive) SPACE RE- SEARCH (passive)  US246 722	EARTH EXPLO- RATION- SATELLITE (passive) SPACE RE- SEARCH (passive)  US246 722	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
102-105	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE  722		102-105	FIXED FIXED-SATEL- LITE (space-to- Earth) MOBILE  US211 722	FIXED FIXED-SATEL- LITE (space-to- Earth) MOBILE  US211 722	
105-116	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)  722 907		105-116	EARTH EXPLO- RATION- SATELLITE (passive) RADIO AS- TRONOMY SPACE RE- SEARCH (passive)  US74 US246 722	EARTH EXPLO- RATION- SATELLITE (passive) RADIO AS- TRONOMY SPACE RE- SEARCH (passive)  US74 US246 722	



## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
116-126	EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE MOBILE 909 SPACE RESEARCH (passive)  722 915 916		116-126	EARTH EXPLO- RATION- SATELLITE (passive) FIXED INTER-SATEL- LITE MOBILE SPACE RE- SEARCH (passive)  US211 US263 722 909 915 916	EARTH EXPLO- RATION- SATELLITE (passive) FIXED INTER-SATEL- LITE MOBILE SPACE RE- SEARCH (passive)  US211 US263 722 909 915 916	ISM 122.5 ± 0.5 GHz
126-134	FIXED INTER-SATELLITE MOBILE 909 RADIOLOCATION 910		126-134	FIXED INTER-SATEL- LITE MOBILE RADIOLOCAT- ION  909 910	FIXED INTER-SATEL- LITE MOBILE RADIOLOCAT- ION  909 910	

# TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
134-142	MOBILE 902 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE Radiolocation  903 917 918		134-142	MOBILE MOBILE-SAT- ELLITE RADIONAVIG ATION RADIONAVIG ATION- SATELLITE Radiolocation  902 903 917 918	MOBILE MOBILE-SAT- ELLITE RADIONAVIG ATION RADIONAVIG ATION- SATELLITE Radiolocation  902 903 917 918	
142-144	AMATEUR AMATEUR-SATELLITE		142-144		AMATEUR AMATEUR- SATELLITE	
144-149	RADIOLOCATION Amateur Amateur-Satellite  918		144-149	RADIOLOCA- TION   2241918	RADIOLOCATI ON Amateur Amateur- Satellite  918	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
149-150	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE		149-150	FIXED FIXED-SATEL- LITE (space-to- Earth) MOBILE	FIXED FIXED-SATEL- LITE (space-to- Earth) MOBILE	
150-151	EARTH EXPLORATION-SATELLITE (passive) FIXED FIXED-SATELLITE (space-to-Earth) MOBILE SPACE RESEARCH (passive)  919		150-151	EARTH EXPLO- RATION- SATELLITE (passive) FIXED FIXED-SATEL- LITE (space-to- Earth) MOBILE SPACE RE- SEARCH (passive)  US263 919	EARTH EXPLO- RATION- SATELLITE (passive) FIXED FIXED-SATEL- LITE (space-to- Earth) MOBILE SPACE RE- SEARCH (passive)  US263 919	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
151-156 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE			151-164	FIXED FIXED-SATEL- LITE (space-to- Earth) MOBILE	FIXED FIXED-SATEL- LITE (space-to- Earth) MOBILE	
156-158 EARTH EXPLORATION-SATELLITE (passive) FIXED FIXED-SATELLITE (space-to-Earth) MOBILE				US211	US211	
158-164 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE						

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
164-168	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)		164-168	EARTH EXPLO- RATION- SATELLITE (passive) RADIO AS- TRONOMY SPACE RE- SEARCH (passive)  US246	EARTH EXPLO- RATION- SATELLITE (passive) RADIO AS- TRONOMY SPACE RE- SEARCH (passive)  US246	
168-170	FIXED MOBILE		168-170	FIXED MOBILE	FIXED MOBILE	
170-174.5	FIXED INTER-SATELLITE MOBILE 909  919		170-174.5	FIXED INTER-SATEL- LITE MOBILE  909 919	FIXED INTER-SATEL- LITE MOBILE  909 919	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
174.5-176.5	EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE MOBILE 909 SPACE RESEARCH (passive)  919		174.5- 176.5	EARTH EXPLO- RATION- SATELLITE (passive) FIXED INTER-SATEL- LITE MOBILE SPACE RE- SEARCH (passive)  US263 909 919	EARTH EXPLO- RATION- SATELLITE (passive) FIXED INTER-SATEL- LITE MOBILE SPACE RE- SEARCH (passive)  US263 909 919	
176.5-182	FIXED INTER-SATELLITE MOBILE 909  919		176.5-182	FIXED INTER-SATEL- LITE MOBILE  US211 909 919	FIXED INTER-SATEL- LITE MOBILE  US211 909 919	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
182-185	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)  920 921		182-185	EARTH EXPLO- RATION- SATELLITE (passive) RADIO AS- TRONOMY SPACE RE- SEARCH (passive)  US246	EARTH EXPLO- RATION- SATELLITE (passive) RADIO AS- TRONOMY SPACE RE- SEARCH (passive)  US246	
185-190	FIXED INTER-SATELLITE MOBILE 909  919		185-190	FIXED INTER-SATEL- LITE MOBILE  US211 909 919	FIXED INTER-SATEL- LITE MOBILE  US211 909 919	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
190-200	MOBILE 902 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE  722 903		190-200	MOBILE MOBILE-SAT- ELLITE RADIONAVIG ATION RADIONAVIG ATION- SATELLITE  722 902 903	MOBILE MOBILE-SAT- ELLITE RADIONAVIG ATION RADIONAVIG ATION- SATELLITE  722 902 903	
200-202	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive)  722		200-202	EARTH EXPLO- RATION- SATELLITE (passive) FIXED MOBILE SPACE RE- SEARCH (passive)  US263 722	EARTH EXPLO- RATION- SATELLITE (passive) FIXED MOBILE SPACE RE- SEARCH (passive)  US263 722	



TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
202-217	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE  722		202-217	FIXED FIXED-SATEL- LITE (Earth-to- space) MOBILE  722	FIXED FIXED-SATEL- LITE (Earth-to- space) MOBILE  722	
217-231	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)  722 907		217-231	EARTH EXPLO- RATION- SATELLITE (passive) RADIO AS- TRONOMY SPACE RE- SEARCH (passive)  US74 US246 722	EARTH EXPLO- RATION- SATELLITE (passive) RADIO AS- TRONOMY SPACE RE- SEARCH (passive)  US74 US246 722	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
231-235  FIXED FIXED-SATELLITE (space-to-Earth) MOBILE Radiolocation			231-235	FIXED FIXED-SATEL- LITE (space-to- Earth) MOBILE Radiolocation  US211	FIXED FIXED-SATEL- LITE (space-to- Earth) MOBILE Radiolocation  US211	

## TABLES OF FREQUENCY ALLOCATIONS

INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
235-238	EARTH EXPLORATION-SATELLITE (passive) FIXED FIXED-SATELLITE (space-to-Earth) MOBILE SPACE RESEARCH (passive)		235-238	EARTH EXPLO- RATION- SATELLITE (passive) FIXED FIXED-SATEL- LITE (space-to- Earth) MOBILE SPACE RE- SEARCH (passive)  US263	EARTH EXPLO- RATION- SATELLITE (passive) FIXED FIXED-SATEL- LITE (space-to- Earth) MOBILE SPACE RE- SEARCH (passive)  US263	
238-241	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE Radiolocation		238-241	FIXED FIXED-SATEL- LITE (space-to- Earth) MOBILE Radiolocation	FIXED FIXED-SATEL- LITE (space-to- Earth) MOBILE Radiolocation	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
241-248	RADIOLOCATION Amateur Amateur-Satellite  922		241-248	RADIOLOCA- TION   922	RADIOLOCATI ON Amateur Amateur- Satellite  922	ISM 245 ± 1 GHz
248-250	AMATEUR AMATEUR-SATELLITE		248-250		AMATEUR AMATEUR- SATELLITE	
250-252	EARTH EXPLORATION-SATELLITE (Passive) SPACE RESEARCH (Passive)  923		250-252	EARTH EXPLO- RATION- SATELLITE (Passive) SPACE RE- SEARCH (Passive)  923	EARTH EXPLO- RATION- SATELLITE (Passive) SPACE RE- SEARCH (Passive)  923	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
252-265	MOBILE 902 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE  903 923 924 925		252-265	MOBILE MOBILE-SAT- ELLITE RADIONAVIG ATION RADIONAVIG ATION- SATELLITE  US211 902 903 923 924	MOBILE MOBILE-SAT- ELLITE RADIONAVIG ATION RADIONAVIG ATION- SATELLITE  US211 902 903 923 924	
265-275	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE RADIO ASTRONOMY  926		265-275	FIXED FIXED-SATEL- LITE (Earth-to- space) MOBILE RADIO AS- TRONOMY  926	FIXED FIXED-SATEL- LITE (Earth-to- space) MOBILE RADIO AS- TRONOMY  926	

TABLES OF FREQUENCY ALLOCATIONS						
INTERNATIONAL			UNITED STATES			
Region 1 GHz	Region 2 GHz	Region 3 GHz	Band GHz	Government Allocation	Non- Government Allocation	Remarks
275-400  (Not Allocated)  927			275-300	FIXED MOBILE  927	FIXED MOBILE  927	
			300-400	(Not allocated)  927	(Not allocated)  927	

(These footnotes, each consisting of the letter "G" followed by one or more digits, denote stipulations applicable only to the Government.)

## FOOTNOTES

### Government (G) Footnotes

**G2**--In the bands 216-225, 420-450 (except as provided by US217), 890-902, 928-942, 1300-1400, 2310-2390, 2417-2450, 2700-2900, 5650-5925, and 9000-9200 MHz, the Government radiolocation is limited to the military services.

**G5**--In the bands 162.0125-173.2, 173.4-174, 406.1-410 and 410-420 MHz, the fixed and mobile services are all allocated on a primary basis to the Government non-military agencies.

**G6**--Military tactical fixed and mobile operations may be conducted nationally on a secondary basis; (1) to the meteorological aids service in the band 403-406 MHz; and (2) to the radio astronomy service in the band 406.1-410 MHz. Such fixed and mobile operations are subject to local coordination to ensure that harmful interference will not be caused to the services to which the bands are allocated.

**G8**--Low power Government radio control operations are permitted in the band 420-450 MHz.

**G11**--Government fixed and mobile radio services

including low power radio control operations, are permitted in the band 902-928 MHz on a secondary basis.

**G15**--Use of the band 2700-2900 MHz by the military fixed and shipborne air defense radiolocation installations will be fully coordinated with the meteorological aids and aeronautical radionavigation services. The military air defense installations will be moved from the band 2700-2900 MHz at the earliest practicable date. Until such time as military air defense installations can be accommodated satisfactorily elsewhere in the spectrum, such operations will, insofar as practicable, be adjusted to meet the requirements of the

aeronautical radio-navigation service.

**G19**--Use of the band 9000-9200 MHz by military fixed and shipborne air defense radiolocation installations will be fully coordinated with the aeronautical radionavigation service, recognizing fully the safety aspects of the latter. Military air defense installations will be accommodated ultimately outside this band. Until such time as military defense installations can be accommodated satisfactorily elsewhere in the spectrum such operations will, in-so-far as practicable, be adjusted to meet the requirements of the aeronautical radionavigation service.

**G27**--In the bands 225-328.6, 335.4-399.9, and 1350-1400 MHz, the fixed and mobile services are limited to the military services.

**G30**--In the bands 138-144, 148-149.9, 150.05-150.8, 1427-1429 and 1429-1435 MHz, the fixed and mobile services are limited primarily to operations by the military services.

**G31**--In the bands 3300-3500 MHz, the Government radiolocation is limited to the military services, except as provided by footnote US108.

**G32**--Except for weather radars on meteorological-satellites in the band 9975-10025 MHz and for Government survey operations (see footnote US108), Government radiolocation in the band 10000-10500 MHz is limited to the military services.

**G34**--In the band 34.4-34.5 GHz, Weather radars on board meteorological satellites for cloud detection are authorized to operate on the basis of equality with military radiolocation devices. All other non-military radiolocation in the band 33.4-36.0 GHz shall be secondary to the military services.

**G42**--Space command, control, range and range rate systems for earth station transmission only (including installations on certain Navy ships) may be accommodated on a co-equal basis with the fixed and mobile services in the band 1761-1842 MHz. Specific frequencies required to be used at any location will be satisfied on a coordinated case-by-case basis.

**G56**--Government radiolocation in the bands

1215-1300, 2900-3100, 5350-5650 and 9300-9500 MHz is primarily for the military services; however, limited secondary use is permitted by other Government agencies in support of experimentation and research programs. In addition, limited secondary use is permitted for survey operations in the band 2900-3100 MHz.

**G59**--In the bands 902-928 MHz, 3100-3300 MHz, 3500-3700 MHz, 5250-5350 MHz, 8500-9000 MHz, 9200-9300 MHz, 13.4-14.0 GHz, 15.7-17.7 GHz and 24.05-24.25 GHz, all Government non-military radiolocation shall be secondary to military radiolocation, except in the subband 15.7-16.2 GHz airport surface detection equipment (ASDE) is permitted on a co-equal basis subject to coordination with the military departments.

**G100**--The bands 235-322 MHz and 335.4-399.9 MHz are also allocated on a primary basis to the mobile-satellite service, limited to military operations.

**G101**--In the band 2200-2290 MHz, space operations (space-to-Earth) and (space-to-space), and earth exploration-satellite (space-to-Earth) and (space-to-space) services, may be accommodated on a co-equal basis with fixed, mobile and space research service.

**G104**--In the bands 7450-7550 and 8175-8215 MHz, it is agreed that although the military space radio communication systems, which include earth stations near the proposed meteorological-satellite installations will precede the meteorological-satellite installations, engineering adjustments to either the military or the meteorological-satellite systems or both will be made as mutually required to assure compatible operations of the systems concerned.

**G106**--The bands 2501-2502 kHz, 5003-5005 kHz, 10003-10005 kHz, 15005-15010 kHz, 19990-19995 kHz, 20005-20010 kHz and 25005-25010 kHz are also allocated, on a secondary basis, to the space research service. The space research transmissions are subject to immediate temporary or permanent shutdown in the event of interference to the reception of the standard frequency and time broadcasts.

**G109**--All assignments in the band 157.0375-157.1875 MHz are subject to adjustment to other frequencies in this band as long term U.S. maritime VHF planning develops, particularly that planning incident to support the National VHF-FM Radiotelephone Safety and Distress System (See Doc. 15624/1-1.9.111/1.9.125).

**G110**--Government ground-based stations in the aeronautical radionavigation service may be authorized between 3500 and 3700 MHz where accommodation in the 2700-2900 MHz band is not technically and/or economically feasible.

**G114**--In the band 1350-1400 MHz, the frequency 1381.05 MHz with emissions limited to  $\pm 12$  MHz is also allocated to Fixed and Mobile-Satellite Services (space-to-Earth) for the relay of nuclear burst data.

**G115**--In the band 13360-13410 kHz, the fixed service is allocated on a primary basis outside the conterminous United States. Within the conterminous United States, assignments in the fixed service are permitted, and will be protected for national defense purposes or, if they are to be used only in an emergency jeopardizing life, public safety, or important property under conditions calling for immediate communication where other means of communication do not exist.

**G116**--The band 7125-7155 MHz is also allocated for Earth-to-space transmission in the Space Operations Service at a limited number of sites (not to exceed two), subject to established coordination procedures.

**G117**--In the bands 7250-7750, 7900-8400 MHz and 17.8-21.2, 30-31, 39.5-40.5, 43.5-45.5 and 50.4-51.4 GHz the Government fixed-satellite and mobile-satellite services are limited to military systems.

**G118**--Government fixed stations may be authorized in the band 1700-1710 MHz only if spectrum is not available in the band 1710-1850 MHz.

**G120**--Development of airborne primary radars in the band 2310-2390 MHz with peak transmitter power in excess of 250 watts for use in the United States is not permitted.



**G121**--In the band 285-325 kHz, the Maritime Radionavigation Service may also be used on a primary basis by Maritime Radionavigation Land Stations to transmit differential global positioning satellite (DGPS) information.

**G122**--The bands 2390-2400, 2402-2417 and 4660-4685 MHz were identified for immediate reallocation, effective August 10, 1994, for exclusive non-Government use under Title VI of the Omnibus Budget Reconciliation Act of 1993. Effective August 10, 1994, any Government operations in these bands are on a non-interference basis to authorized non-Government operations and shall not hinder the implementation of any non-Government operations.

**G123**--The bands 2300-2310 and 2400-2402 MHz were identified for reallocation, effective August 10, 1995, for exclusive non-Government use under Title VI of the Omnibus Budget Reconciliation Act of 1993. Effective August 10, 1995, any Government operations in these bands are on a non-interference basis to authorized non-Government operations and shall not hinder the implementation of any non-Government operations.

**G124**--The band 2417-2450 MHz was identified for reallocation, effective August 10, 1995, for mixed Government and non-Government use under Title VI of the Omnibus Budget Reconciliation Act of 1993.

**G125**--The 4635-4660 MHz band was identified for reallocation, effective January 1, 1997, for exclusive non-Government use under Title VI of the Omnibus Budget Reconciliation Act of 1993. Effective January 1, 1997, any Government operations in this band are on a non-interference basis to authorized non-Government operations and shall not hinder the implementation of any non-Government operations. However, Government operation of mobile (including airborne) systems authorized as of March 22, 1995, within 80 km of Pico Del Este, PR (18° 16' N, 65° 46' W), Dam Neck, VA (36° 46' N, 75° 57' W), and St. Thomas, VI (18° 21' N, 64° 55' W) will be permitted on a fully

protected basis until January 1, 2009.

**G126**--Differential-Global-Positioning-System (DGPS) Stations may be authorized on a primary basis in the bands 108-117.975 MHz, 1559-1610 MHz, and 5000-5150 MHz for the specific purpose of transmitting DGPS information intended for aircraft navigation.

### US Footnotes

(These footnotes, each consisting of the letters US followed by one or more digits, denote stipulations applicable to both Government and non-Government stations.)

**US7**--In the band 420-450 MHz and within the following areas, the peak envelope power output of a transmitter employed in the amateur service shall not exceed 50 watts, unless expressly authorized by the Commission after mutual agreement, on a case-by-case basis, between the Federal Communications Commission Engineer in Charge at the applicable district office and the military area frequency coordinator at the applicable military base. For areas (e) through (j), the appropriate military coordinator is located at Peterson AFB, CO.

(a) Those portions of Texas and New Mexico bounded on the south by latitude 31°45' North, on the east by 104°00' West, on the north by latitude 34°30' North, and on the west by longitude 107°30' West;

(b) The entire State of Florida including the Key West area and the areas enclosed within a 322 kilometer (200-mile) radius of Patrick Air Force Base, Florida (latitude 28°21' North, longitude 80°43' West), and within a 322 kilometer (200-mile) radius of Eglin Air Force Base, Florida (latitude 30°30' North, longitude 86°30' West);

(c) The entire State of Arizona;

(d) Those portions of California and Nevada south of latitude 37°10' North, and the areas enclosed within a 322 kilometer (200-mile) radius of the Pacific Missile Test Center, Point Mugu, California (latitude 34°09' North,

longitude 119°11' West).

(e) In the State of Massachusetts within a 160-kilometer (100 mile) radius around locations at Otis Air Force Base, Massachusetts (latitude 41°45' North, longitude 70°32' West).

(f) In the State of California within a 240-kilometer (150 mile) radius around locations at Beale Air Force Base, California (latitude 39°08' North, longitude 121°26' West).

(g) In the State of Alaska within a 160 kilometer (100 mile) radius of Clear, Alaska (latitude 64 degrees, 17' North, longitude 149 degrees 10' West).

(h) In the State of North Dakota within a 160 kilometer (100 mile) radius of Concrete, North Dakota (latitude 48 degrees 43' North, longitude 97 degrees 54' West).

(i) In the States of Alabama, Florida, Georgia and South Carolina within a 200 kilometer (124 mile) radius of Warner Robins Air Force Base, Georgia (latitude 32° 38' North, longitude 83° 35' West).

(j) In the State of Texas within a 200-kilometer (124 mile) radius of Goodfellow Air Force Base, Texas (latitude 31° 25' North, longitude 100° 24' West).

**US8**--The use of frequencies 170.475, 171.425, 171.575 and 172.275 MHz east of the Mississippi River, and 170.425, 170.575, 171.475, 172.225 and 172.375 MHz west of the Mississippi River may be authorized to fixed, land and mobile stations operated by non-Federal forest firefighting agencies. In addition, land stations and mobile stations operated by non-Federal conservation agencies, for mobile relay operation only, may be authorized to use the frequency 172.275 MHz east of the Mississippi River and the frequency 171.475 MHz west of the Mississippi River. The use of any of the foregoing nine frequencies shall be on the condition that no harmful interference will be caused to Government stations.

**US10**--The use of the frequencies 26.62, 143.75, 143.90 and 148.15 MHz may be authorized to Civil Air Patrol land stations and Civil Air

Patrol mobile stations.

**US11**--The use of the frequencies 166.250 and 170.150 MHz may be authorized to non-Government remote pickup broadcast base and land mobile stations and to non-Government base, fixed and land mobile stations in the public safety radio services (the sum of the bandwidth of emission and tolerance is not to exceed 25 kHz, except that authorizations in existence as of December 20, 1974, using a larger bandwidth are permitted to continue in operation until December 20, 1979) in the continental United States (excluding Alaska) only, except within the area bounded on the west by the Mississippi River, on the north by the parallel of latitude 37°30' N., and on the east and south by that arc of the circle with center at Springfield, Illinois, and radius equal to the airline distance between Springfield, Illinois, and Montgomery, Alabama, subtended between the foregoing west and north boundaries, on the conditions that harmful interference will not be caused to Government stations present or future in the Government and 162-174 MHz. The use of these frequencies by remote pickup broadcast stations will not be authorized for locations within 240 kilometers (150 miles) of New York City; and use of these frequencies by the public safety radio services will not be authorized except for locations within 240 kilometers (150 miles) of New York City.

**US13**--For the specific purpose of transmitting hydrological and meteorological data in cooperation with agencies of the Federal Government, the following frequencies may be authorized to non-Government fixed stations on the condition that harmful interference will not be caused to Government stations:

MHz	MHz	MHz	MHz
169.425	170.275	171.125	406.175
169.450	170.300	171.825	409.675
169.475	170.325	171.850	409.725
169.500	171.025	171.875	412.625
169.525	171.050	171.900	412.675
170.225	171.075	171.925	412.725
170.250	171.100	406.125	412.775

Licensees holding a valid authorization on June 11, 1962, to operate on the frequencies 169.575, 170.375, or 171.975 MHz may continue to be authorized for such operations on the condition that harmful interference will not be caused to Government stations.

**US14**--When 500 kHz is being used for distress purposes, ship and coast stations using morse telegraphy may use 512 kHz for calling.

**US18**--Navigation aids in the US and possessions in the bands 9-14 kHz, 90-110 kHz, 190-415 kHz, 510-535 kHz, and 2700-2900 MHz are normally operated by the U.S. Government. However, authorizations may be made by the FCC for non-Government operation in these bands subject to the conclusion of appropriate arrangements between the FCC and the Government agencies concerned and upon special showing of need for service which the Government is not yet prepared to render.

**US25**--The use of frequencies in the band 25.85-26.1. MHz may be authorized in any area to non-Government remote pickup broadcast base and mobile stations on the condition that harmful interference is not caused to stations in the broadcasting service.

**US26**--The bands 117.975-121.4125 MHz, 123.5875-128.8125 MHz and 132.0125-136 MHz are for air traffic control communications.

**US28**--The band 121.5875-121.9375 MHz is for use by aeronautical utility land and mobile stations, and for air traffic control communications.

**US30**--The band 121.9375-123.0875 MHz is available to FAA aircraft for communications pursuant to flight inspection functions in accordance with the Federal Aviation Act of 1958.

**US31**--Except as provided below the band 121.9375-123.0875 MHz is for use by private aircraft stations.

The frequencies 122.700, 122.725, 122.750, 122.800, 122.950, 122.975, 123.000, 123.050 and 123.075 MHz may be assigned to aeronautical advisory stations. In addition, at landing areas having a part-time or no airdrome control tower or FAA flight service

station, these frequencies may be assigned on a secondary non-interference basis to aeronautical utility mobile stations, and may be used by FAA ground vehicles for safety related communications during inspections conducted at such landing areas.

The frequencies 122.850, 122.900 and 122.925 MHz may be assigned to aeronautical multicom stations. In addition, 122.850 MHz may be assigned on a secondary non-interference basis to aeronautical utility mobile stations. In case of 122.925 MHz, US213 applies.

Air carrier aircraft stations may use 122.000 and 122.050 MHz for communication with aeronautical stations of the Federal Aviation Administration and 122.700, 122.800, 122.900 and 123.000 MHz for communications with aeronautical stations pertaining to safety of flight with and in the vicinity of landing areas not served by a control tower.

Frequencies in the band 121.9375-122.6875 MHz may be used by aeronautical stations of the Federal Aviation Administration for communication with private aircraft stations only, except that 122.000 and 122.050 MHz may also be used for communication with air carrier aircraft stations concerning weather information.

**US32**--Except for the frequencies 123.3 and 123.5 MHz which are not authorized for Government use, the band 123.1125-123.5875 MHz is available for FAA Communications incident to flight test and inspection activities pertinent to aircraft and facility certification on a secondary non-interference basis.

**US33**--The band 123.1125-123.5875 MHz is for use by flight test and aviation instructional stations. The frequency 121.950 MHz is available for aviation instructional stations.

**US41**--The Government radiolocation service is permitted in the band 2450-2500 MHz on the condition that harmful interference is not caused to non-Government services.

**US44**--The non-Government radiolocation service may be authorized in the band 2900-3100

MHz on the condition that no harmful interference is caused to Government services.

**US48**--The non-Government radiolocation service may be authorized in the bands 5350-5460 MHz and 9000-9200 MHz on the condition that it does not cause harmful interference to the aeronautical radionavigation service or to the Government radiolocation service.

**US49**--The non-Government radiolocation service may be authorized in the band 5460-5470 MHz on the condition that it does not cause harmful interference to the aeronautical or maritime radionavigation services or to the Government radiolocation service.

**US50**--The non-Government radiolocation service may be authorized in the band 5470-5600 MHz on the condition that it does not cause harmful interference to the maritime radionavigation service or to the Government radiolocation service.

**US51**--In the bands 5600-5650 MHz and 9300-9500 MHz, the non-Government radiolocation service shall not cause harmful interference to the Government radiolocation service.

**US53**--In view of the fact that the band 13.25-13.4 GHz is allocated to doppler navigation aids, Government and non-Government airborne doppler radars in the aeronautical radionavigation service are permitted in the band 8750-8850 MHz only on the condition that they must accept any interference which may be experienced from stations in the radiolocation service in the band 8500-10000 MHz.

**US54**--Temporarily, and until certain operations of the radiolocation service in the band 9000-9200 MHz can be transferred to other appropriate frequency bands, the aeronautical radionavigation service may, in certain geographical areas, be subject to receiving some degree of interference from the radiolocation service.

**US58**--In the band 10000-10500 MHz, pulsed emissions are prohibited, except for weather radars on board meteorological-satellites in the band 10000-10025 MHz. The amateur service and the non-Government radiolocation service, which shall not cause harmful interference to

the Government radiolocation service, are the only non-Government services permitted in this band. The non-Government radiolocation service is limited to survey operations as specified in footnote US108.

**US59**--The band 10.5-10.55 GHz is restricted to systems using type N0N emission with a power not to exceed 40 watts into the antenna.

**US65**--The use of the band 5460-5650 MHz by the maritime radionavigation service is limited to shipborne radars.

**US66**--The use of the band 9300-9500 MHz by the aeronautical radionavigation service is limited to airborne radars and associated airborne beacons. In addition, ground-based radar beacons in the aeronautical radionavigation service are permitted in the band 9300-9320 MHz on condition that harmful interference is not caused to the maritime radionavigation service.

**US67**--The use of the band 9300-9500 MHz by the meteorological aids service is limited to ground based radars. Radiolocation installations will be coordinated with the meteorological aids service and, insofar as practicable, will be adjusted to meet the requirements of the meteorological aids service.

**US69**--In the band 31.8-33.4 GHz, ground-based radionavigation aids are not permitted except where they operate in co-operation with airborne or shipborne radionavigation devices.

**US70**--The meteorological aids service allocation in the band 400.15-406 MHz does not preclude the operation therein of associated ground transmitters.

**US71**--In the band 9300-9320 MHz, low-powered maritime radionavigation stations shall be protected from harmful interference caused by the operation of land-based equipment.

**US74**--In the bands 25.55-25.67, 73-74.6, 406.1-410, 608-614, 1400-1427, 1660.5-1670, 2690-2700, and 4990-5000 MHz and in the bands 10.68-10.7, 15.35-15.4, 23.6-24, 31.3-31.8, 86-92, 105-116, and 217-231 GHz, the radio astronomy service shall be protected from extraband radiation only to the extent such

radiation exceeds the level which would be present if the offending station were operating in compliance with the technical standards or criteria applicable to the service in which it operates.

**US77**--Government stations may also be authorized:

(a) Port operations use on a simplex basis by coast and ship stations on the frequencies 156.6 and 156.7 MHz;

(b) Duplex port operations use of the frequency 157.0 MHz for ship stations and 161.6 MHz for coast stations;

(c) Intership use of 156.3 MHz on a simplex basis; and

(d) Vessel traffic services under the control of the U.S. Coast Guard on a simplex basis by coast and ship stations on the frequencies 156.25, 156.55, 156.6 and 156.7 MHz.

(e) Navigational bridge-to-bridge and navigational communications on a simplex basis by coast and ship stations on the frequencies 156.375 and 156.65 MHz.

**US78**--In the mobile service, the frequencies between 1435 and 1535 MHz will be assigned for aeronautical telemetry and associated telecommand operations for flight testing of manned or unmanned aircraft and missiles, or their major components. Permissible usage includes telemetry associated with launching and reentry into the earth's atmosphere as well as any incidental orbiting prior to reentry of manned objects undergoing flight tests. The following frequencies are shared with flight telemetering mobile stations: 1444.5, 1453.5, 1501.5, 1515.5, 1535.5 and 1525.5 MHz.

**US80**--Government stations may use the frequency 122.9 MHz subject to the following conditions:

(a) All operations by Government stations shall be restricted to the purpose for which the frequency is authorized to non-Government stations, and shall be in accordance with the appropriate provisions of the Commission's rules and regulations, Part 87, Aviation Services;

(b) Use of the frequency is required for coordination of activities with Commission licensees operating on this frequency; and

(c) Government stations will not be authorized for operations at fixed locations.

**US81**--The band 38-38.25 MHz is used by both Government and non-Government radio astronomy observatories. No new fixed or mobile assignments are to be made and Government stations in the band 38-38.25 MHz will be moved to other bands on a case-by-case basis, as required, to protect radio astronomy observations from harmful interference. As an exception however, low powered military transportable and mobile stations used for tactical and training purposes will continue to use the band. To the extent practicable, the latter operations will be adjusted to relieve such interference as may be caused to radio astronomy observations. In the event of harmful interference from such local operations, radio astronomy observatories may contact local military commands directly, with a view to effecting relief. A list of military commands, areas of coordination, and points of contact for purposes of relieving interference may be obtained upon request from the Office of the Chief Scientist, Federal Communications Commission, Washington, D.C. 20554.

**US82**--Until July 1, 1991, the assignable frequencies in the bands 4143.6-4146.6 kHz, 6218.6-6224.6 kHz, 8291.1-8297.3 kHz, 12429.2-12439.5 kHz, 16587.1-16596.4 kHz and 22124-22139.5 kHz may be authorized on a shared non-priority basis to Government and non-Government ship and coast stations (SSB telephony, with peak envelope power not to exceed 1 kW). Effective July 1, 1991, the assignable frequencies in the bands 4146-4152 kHz, 6224-6233 kHz, 8294-8300 kHz, 12353-12368 kHz, 16528-16549 kHz, 18825-18846 kHz, 22159-22180 kHz, and 25100-25121 kHz may be authorized on a shared non-priority basis to Government and non-Government ship and coast stations (SSB telephony, with peak envelope power not to exceed 1 kW).

**US87**--The frequency 450 MHz, with maximum

emission bandwidth of 500 kHz, may be used by Government and non-Government stations for space telecommand at specific locations, subject to such conditions as may be applied on a case-by-case basis.

**US90**--In the band 2025-2110 MHz Earth-to-space and space-to-space transmissions may be authorized in the space research and earth exploration-satellite services subject to such conditions as may be applied on a case-by-case basis. Such transmissions shall not cause harmful interference to non-Government stations operating in accordance with the Table of Frequency Allocations. All space-to-space transmission reaching the earth's surface shall adhere to a power flux density of between  $-144$  and  $-154$  dBw/m<sup>2</sup>/4 kHz depending on the angle of arrival per ITU Radio Regulation 2557 and shall not cause harmful interference to the other space services.

**US93**--In the conterminous United States, the frequency 108.0 MHz may be authorized for use by VOR test facilities, the operation of which is not essential for the safety of life or property, subject to the condition that no interference is caused to the reception of FM broadcasting stations operating in the band 88-108 MHz. In the event that such interference does occur, the licensee or other agency authorized to operate the facility shall discontinue operation on 108 MHz and shall not resume operation until the interference has been eliminated or the complaint otherwise satisfied. VOR test facilities operating on 108 MHz will not be protected against interference caused by FM broadcasting stations operating in the band 88-108 MHz nor shall the authorization of a VOR test facility on 108 MHz preclude the Commission from authorizing additional FM broadcasting stations.

**US99**--In the band 1668.4-1670 MHz, the meteorological aids service (radiosonde) will avoid operations to the maximum extent practicable. Whenever it is necessary to operate radiosondes in the band 1668.4-1670 MHz within the United States, notification of the operations shall be

sent as far in advance as possible to the Electromagnetic Spectrum Management Unit, National Science Foundation, Washington, D.C. 20550.

**US102**--In Alaska only, the frequency 122.1 MHz may also be used for air carrier air traffic control purposes at locations where other frequencies are not available to air carrier aircraft stations for air traffic control.

**US104**--The LORAN Radionavigation System has priority in the band 90-110 kHz in the United States and Possessions. Radiolocation land stations making use of LORAN type equipment may be authorized to both Government and non-Government on a Secondary Service basis for offshore radiolocation activities only at specific locations and subject to such technical and operational conditions (e.g., power, emission, pulse rate and phase code, hours of operation), including on-the-air testing, as may be required on a case-by-case basis to ensure protection of the LORAN Radionavigation System from harmful interference and to ensure mutual compatibility among radiolocation operators. Such authorizations to stations in the radiolocation service are further subject to showing of need for service which is not currently provided and which the Government is not yet prepared to render by way of the radionavigation service.

**US106**--The frequency 156.75 MHz is available for assignment to non-Government and Government stations for environmental communications in accordance with an agreed plan.

**US107**--The frequency 156.8 MHz is the international distress, safety and calling frequency for the maritime mobile VHF radiotelephone service for use by Government and non-Government ship and coast stations. Guard bands of 156.7625-156.7875 and 156.8125-156.8375 MHz are maintained.

**US108**--Within the bands 3300-3500 MHz and 10000-10500 MHz, survey operations, using transmitters with a peak power not to exceed five watts into the antenna, may be authorized for Government and non-Government use on a

secondary basis to other Government radiolocation operations.

**US110**--In the frequency bands 3100-3300 MHz, 3500-3700 MHz, 5250-5350 MHz, 8500-9000 MHz, 9200-9300 MHz, 9500-10000 MHz, 13.4-14.0 GHz, 15.7-17.3 GHz, 24.05-24.25 GHz and 33.4-36 GHz, the non-Government radiolocation service shall be secondary to the Government radiolocation service and to airborne doppler radars at 8800 MHz, and shall provide protection to airport surface detection equipment (ASDE) operating between 15.7-16.2 GHz.

**US111**--In the band 1990-2120 MHz, Government space research earth stations may be authorized to use specific frequencies at specific locations for earth-to-space transmissions. Such authorizations shall be secondary to non-Government use of this band and subject to such other conditions as may be applied on a case-by-case basis.

Corpus Christi, Tex., 27° 39' N 097° 23' W.

Fairbanks, Alaska, 64° 59' N 147° 53' W.

Goldstone, Calif., 35° 18' N 116° 54' W.

Greenbelt, Md., 39° 00' N 076° 50' W.

Guam, Mariana Is., 13° 19' N 144° 44' E.

Kauai, Hawaii, 22° 08' N 159° 40' W.

Merritt Is., Fla., 28° 29' N 080° 35' W.

Roseman, N.C., 35° 12' N 082° 52' W.

Wallops Is., Va., 37° 57' N 075° 28' W.

**US112**--The frequency 123.1 MHz is for search and rescue communications. This frequency may be assigned for air traffic control communications at special aeronautical events on the condition that no harmful interference is caused to search and rescue communications during any period of search and rescue operations in the locale involved.

**US116**--In the bands 890-902 MHz, 928-932 MHz, and 935-941 MHz, no new assignments are to be made to Government radio stations after July 10, 1970, except, on a case-by-case basis, to experimental stations and to additional stations of existing networks in Alaska. Government assignments existing prior to July 10, 1970 to stations in Alaska may be continued. All

other existing Government assignments shall be on a secondary basis to stations in the non-Government land mobile service and shall be subject to adjustment or removal from the bands 890-902 MHz, 928-932 MHz, and 935-941 MHz, at the request of the FCC.

**US117**--In the band 406.1-410 MHz, all new authorizations will be limited to a maximum 7 watts per kHz of necessary bandwidth; existing authorizations as of November 30, 1970 exceeding this power are permitted to continue in use.

New authorizations in this band for stations, other than mobile and transportable stations, within the following areas are subject to prior coordination by the applicant through the Electromagnetic Spectrum Management Unit, National Science Foundation, Washington, D.C. 20550 (202-357-9696):

*Arecibo Observatory:*

Rectangle between latitudes 17° 30' N and 19° 00' N and between longitudes 65° 10' W and 68° 00' W.

*Owens Valley Radio Observatory:*

Two contiguous rectangles, one between latitudes 36° N and 37° N and longitudes 117° 40' W and 118° 30' W and the second between latitudes 37° N and 38° N and longitudes 118° W and 118° 50' W.

*Sagamore Hill Radio Observatory:*

Rectangle between latitudes 42° 10' N and 43° 00' N and longitudes 70° 31' W and 71° 31' W.

*Table Mountain Solar Observatory (NOAA) Boulder, Colorado (407-409 MHz only)*

Rectangle between latitudes 39° 30' N and 40° 30' N and longitudes 104° 30' W and 106° 00' W or the Continental Divide whichever is farther east.

The non-Government use of this band is limited to the radio astronomy service and as provided by footnote US13.

**US201**--In the band 460-470 MHz, space stations in the earth exploration-satellite service may be authorized for space-to-Earth transmission on a secondary basis with respect to the fixed and mobile services. When operating in

the meteorological-satellite service such stations shall be protected from harmful interference from other applications of the earth exploration-satellite service. The power flux density produced at the earth's surface by any space station in this band shall not exceed  $-152$  dBW/m<sup>2</sup>/4 kHz.

**US203**--Radio astronomy observations of the formaldehyde line frequencies 4825-4835 MHz and 14.470-14.500 GHz may be made at certain radio astronomy observatories as indicated below:

Bands to be Observed		Observatory
4 GHz	14 GHz	
X		National Astronomy and Ionosphere Center, Arecibo, Puerto Rico
X	X	National Radio Astronomy Observatory, Green Bank, West Virginia
X	X	National Radio Astronomy Observatory, Socorro, New Mexico
X	X	Hat Creek Observatory (U. of Calif.), Hat Creek, California
X	X	Haystack Radio Observatory (MIT-Lincoln Lab) Tyngsboro, Massachusetts
X	X	Owens Valley Radio Observatory (Cal. Tech.), Big Pine, California
	X	Five College Radio Astronomy Observatory, Quabbin Reservoir (near Amherst) Massachusetts

Every practicable effort will be made to avoid the assignment of frequencies to stations in the fixed or mobile services in these bands. Should such assignments result in harmful interference to these observations, the situation will be remedied to the extent practicable.

**US205**--Tropospheric scatter systems are prohibited in the band 2500-2690 MHz.

**US208**--Planning and use of the band 1559-1626.5 MHz necessitate the development of technical and/or operational sharing criteria to ensure the maximum degree of electromagnetic compatibility with existing and planned systems within the band.

**US209**--The use of frequencies 460.6625,

460.6875, 460.7125, 460.7375, 460.7625, 460.7875, 460.8125, 460.8375, 460.8625, 465.6625, 465.6875, 465.7125, 465.7375, 465.7625, 465.7875, 465.8125, 465.8375 and 465.8625 MHz may be authorized with 100 mW or less output power, to Government and non-Government radio stations for one-way, non-voice biomedical telemetry operations in hospitals, or in medical or convalescent centers.

**US210**--Use of frequencies in the bands 40.66-40.70 and 216-220 MHz may be authorized to Government and non-Government stations on a secondary basis for the tracking of, and telemetering of scientific data from, ocean buoys and wildlife. Airborne wildlife telemetry in the 216-220 MHz band will be limited to the 216.000-216.100 MHz portion of the band. Operation in these two bands is subject to the technical standards specified in (a) Section 8.2.42 of the NTIA Manual for Government use, or (b) in Section 5.108 of the Commission's Rules for non-Government.

**US211**--In the bands 1670-1690, 5000-5250 MHz, and 10.7-11.7, 15.1365-15.35, 15.4-15.7, 22.5-22.55, 24-24.05, 31.0-31.3, 31.8-32, 40.5-42.5, 84-86, 102-105, 116-126, 151-164, 176.5-182, 185-190, 231-235, 252-265 GHz, applicants for airborne or space station assignments are urged to take all practicable steps to protect radio astronomy observations in the adjacent bands from harmful interference; however, US74 applies.

**US212**--In the State of Alaska, the carrier frequency 5167.5 kHz (assigned frequency 5168.9 kHz) is designated for emergency communications. This frequency may also be used in the Alaska-Private Fixed Service for calling and listening, but only for establishing communications before switching to another frequency. The maximum power is limited to 150 watts peak envelope power (PEP).

**US213**--The frequency 122.925 MHz is for use only for communications with or between aircraft when coordinating natural resources programs of Federal or State natural resources agencies, including forestry management and



fire suppression, fish and game management and protection and environmental monitoring and protection.

**US214**--The frequency 157.100 MHz is the primary frequency for liaison communications between ship stations and stations of the United States Coast Guard.

**US215**--Emissions from microwave ovens manufactured on and after January 1, 1980, for operation on the frequency 915 MHz must be confined within the band 902-928 MHz. Emissions from microwave ovens manufactured prior to January 1, 1980, for operation on the frequency 915 MHz must be confined within the band 902-940 MHz. Radiocommunications services operating within the band 928-940 MHz must accept any harmful interference that may be experienced from the operation of microwave ovens manufactured before January 1, 1980.

**US216**--The frequencies 150.775 and 150.790, and the bands 152-152.0150, 163.2375-163.2625, 462.9375-463.1875, and 467.9375-468.1875 MHz are authorized for Government/non-Government operations in medical radio communications systems.

**US217**--Pulse-ranging radiolocation systems may be authorized for Government and non-Government use in the 420-450 MHz band along the shorelines of Alaska and the contiguous 48 States. Spread spectrum radiolocation systems may be authorized in the 420-435 MHz portion of the band for operation within the contiguous 48 States and Alaska. Authorizations will be granted on a case-by-case basis; however, operations proposed to be located within the zones set forth in US228 should not expect to be accommodated. All stations operating in accordance with this provision will be secondary to stations operating in accordance with the Table of Frequency Allocations.

**US218**--The band 902-928 MHz is available for Location and Monitoring Service (LMS) systems subject to not causing harmful interference to the operation of all Government stations authorized in these bands. These

systems must tolerate interference from the operation of industrial, scientific, and medical (ISM) devices and the operation of Government stations authorized in these bands.

**US219**--In the band 2025-2110 MHz Government Earth Resources Satellite Earth Stations in the Earth Exploration-Satellite Service may be authorized to use the frequency 2106.4 MHz for Earth-to-space transmissions for tracking, telemetry, and telecommand at the sites listed below. Such transmissions shall not cause harmful interference to non-Government operations:

Sioux Falls, S.D., 43° 32' 03.1" N 96° 45' 42.8" W.

Fairbanks, Alaska, 64° 58' 36.6" N 147° 30' 54.2" W.

**US220**--The frequencies 36.25 and 41.71 MHz may be authorized to Government stations and non-Government stations in the Petroleum Radio Service, for oil spill containment and cleanup operations. The use of these frequencies for oil spill containment or cleanup operations is limited to the inland and coastal waterways regions.

**US221**--Use of the mobile service in the bands 525-535 kHz and 1605-1615 kHz is limited to distribution of public service information from Travelers Information stations operating on 530 kHz or 1610 kHz.

**US222**--In the band 2025-2035 MHz Geostationary Operational Environmental Satellite Earth stations in the Space Research and Earth Exploration-Satellite Services may be authorized on a co-equal basis to use the frequency band 2025-2035 MHz for Earth-to-space transmissions for tracking, telemetry, and telecommand at the sites listed below:

Wallops Is., Va., 37°50'48"N 75°27'33"W.

Seattle, Wa., 47°34'15"N 122°33'10"W.

Honolulu, Ha., 21°21'12"N 157°52'36"W.

**US223**--Within 120 kilometers (75 miles) of the United States/ Canada border on the Great Lakes, the Saint Lawrence Seaway, and the Puget Sound and the Strait of Juan de Fuca and its approaches, use of coast transmit frequency

162.025 MHz and ship station transmit frequency 157.425 MHz (VHF maritime mobile service channel 88) may be authorized for use by the maritime mobile service for public correspondence.

**US224**--Government systems utilizing spread spectrum techniques for terrestrial communication, navigation and identification may be authorized to operate in the band 960-1215 MHz on the condition that harmful interference will not be caused to the aeronautical radionavigation service. These systems will be handled on a case-by-case basis. Such systems shall be subject to a review at the national level for operational requirements and electromagnetic compatibility prior to development, procurement or modification.

**US225**--In addition to its present Government use, the frequency band 510-525 kHz is available to Government and non-Government aeronautical radionavigation stations inland of the Territorial Base Line<sup>1</sup> as coordinated with the military services. In addition, the frequency 510 kHz is available for non-Government ship-helicopter operations when beyond 185 kilometers (100 nautical miles) from shore and required for aeronautical radionavigation.

**US226**--In the State of Hawaii, stations in the aeronautical radionavigation service shall not cause harmful interference to U.S. Navy reception from its station at Honolulu on 198 kHz.

**US228**--Applicants of operation in the band 420 to 450 MHz under the provisions of US217 should not expect to be accommodated if their area of service is within the following geographic areas:

(a) Those portions of Texas and New Mexico bounded on the south by latitude 31° 45' North, on the east by longitude 104° 00' West, on the north by latitude 34° 30' North, and on the West by longitude 107° 30' West.

(b) The entire State of Florida including the Key West area and the areas enclosed within a 322 kilometer (200-mile) radius of Patrick Air Force Base, Florida (latitude 28° 21' North, longitude 80° 43' West), and within a 322 kilo-

meter (200-mile) radius of Eglin Air Force Base, Florida (Latitude 30° 30' North, Longitude 86° 30' West).

(c) The entire State of Arizona;

(d) Those portions of California and Nevada south of latitude 37° 10' North, and the areas enclosed within a 322 kilometer (200-mile) radius of the Pacific Missile Test Center, Point Mugu, California (latitude 34° 09' North, longitude 119° 11' West).

(e) In the State of Massachusetts within a 160-kilometer (100-mile) radius around locations at Otis Air Force Base, Massachusetts (latitude 41° 45' North, longitude 70° 32' West).

(f) In the State of California within a 240-kilometer (150-mile) radius around locations at Beale Air Force Base, California (latitude 39° 08' North, longitude 121° 26' West).

(g) In the State of Alaska within a 160 kilometer (100-mile) radius of Clear, Alaska (latitude 64 degrees, 17' North, longitude 149 degrees 10' West).

(h) In the State of North Dakota within a 160-kilometer (100-mile) radius of Concrete, North Dakota (latitude 48 degrees 43' North, longitude 97 degrees 54' West).

(i) In the States of Alabama, Florida, Georgia and South Carolina within a 200-kilometer (124-mile) radius of Warner Robins Air Force Base, Georgia (latitude 32° 38' North, longitude 83° 35' West).

(j) In the State of Texas within a 200-kilometer (124-mile) radius of Goodfellow Air Force Base, Texas (latitude 31° 25' North, longitude 100° 24' West).

**US229**--Assignments to stations in the fixed and mobile services may be made on the condition that no harmful interference is caused to the Navy SPASUR system currently operating in the southern United States in the frequency band 216.88-217.08 MHz.

**US230**--Non-government land mobile service is allocated on a primary basis in the bands 422.1875-425.4875 and 427.1875-429.9875 MHz within 80 kilometers (50 statute miles) of Detroit, MI, and Cleveland, OH, and in the bands

423.8125-425.4875 and 428.8125-429.9875 MHz within 80 kilometers (50 statute miles) of Buffalo, NY.

**US231**--When an assignment cannot be obtained in the bands between 200 and 525 kHz, which are allocated to Aeronautical Radionavigation, assignments may be made to aeronautical radiobeacons in the maritime mobile band 435-490 kHz, on a secondary basis, subject to the coordination and agreement of those agencies having assignments within the maritime mobile band which may be affected. Assignments to aeronautical radionavigation radiobeacons in the band 435-490 kHz shall not be a bar to any required changes to the Maritime Mobile Radio Service and shall be limited to Government not employing voice emissions.

**US235**--Until implementation procedures and schedules are determined by future conferences of the International Telecommunication Union, the bands 9775-9900, 11650-11700, 11975-12050, 13600-13800, 15450-15600, 17550-17700 and 21750-21850 kHz to be implemented by the broadcasting service are allocated as an alternative allocation to the fixed service. The bands 12230-12330, 16360-16460, 17360-17410, 18780-18900, 19680-19800, 22720-22855, 25110-25210, and 26100-26175 kHz to be implemented by the maritime mobile service are also allocated as an alternative allocation to the fixed service until July 1, 1991, when these bands are to be allocated exclusively to the maritime mobile service.

**US236**--Until implementation procedures and schedules are determined by future conferences of the International Telecommunication Union (see Resolution 319), the bands 4000-4063 and 8100-8195 kHz are also allocated on a primary basis to the fixed service.

**US237**--Until implementation procedures and schedules are determined by a future Regional Conference of the International Telecommunication Union, the band 1615-1625 kHz is also allocated on a primary basis to the radiolocation service.

**US238**--Until implementation procedures and

schedules are determined by a future Regional Conference of the International Telecommunication Union, the band 1625-1705 kHz is allocated to the radiolocation service on a primary basis as a different category of service.

**US239**--Aeronautical radionavigation stations (radiobeacons) may be authorized, primarily for off-shore use, in the band 525-535 kHz on a non-interference basis to Travelers Information Stations.

**US240**--The bands 1715-1725 kHz and 1740-1750 kHz are allocated on a primary basis and the bands 1705-1715 kHz and 1725-1740 kHz on a secondary basis to the aeronautical radionavigation service, (radiobeacons).

**US244**--The band 136-137 MHz is allocated to the non-Government aeronautical mobile (R) service on a primary basis, and is subject to pertinent international treaties and agreements. The frequencies 136.000 MHz, 136.025 MHz, 136.050 MHz, 136.075 MHz, 136.125 MHz, 136.150 MHz, 136.175 MHz, 136.225 MHz, 136.250 MHz, 136.300 MHz, 136.325 MHz, 136.350 MHz, 136.400 MHz, 136.425 MHz and 136.450 MHz are available on a shared basis to the Federal Aviation Administration for air traffic control purposes, such as automatic weather observation services, automatic terminal information services and airport control tower communications. Stations licensed prior to January 2, 1990, using the 136-137 MHz band for space operations (space-to-Earth), meteorological-satellite service (space-to-Earth), and the space research service (space-to-Earth) may continue to use this band on a secondary basis to aeronautical mobile (R) service stations. No new assignments will be made to stations in the above space services.

**US245**--The Fixed-Satellite Service is limited to International inter-Continental systems and subject to case-by-case electromagnetic compatibility analysis.

**US246**--No stations will be authorized to transmit in the bands 608-614 MHz, 1400-1427 MHz, 1660.5-1668.4 MHz, 2690-2700 MHz, 4990-5000 MHz, 10.68-10.70 GHz, 15.35-15.40

GHz, 23.6-24.0 GHz, 31.3-31.8 GHz, 51.4-54.25 GHz, 58.2-59.0 GHz, 64-65 GHz, 86-92 GHz, 100-102 GHz, 105-116 GHz, 164-168 GHz, 182-185 GHz and 217-231 GHz.

**US247**--The band 10100-10150 kHz is allocated to the fixed service on a primary basis outside the United States and Possessions. Transmissions of stations in the amateur service shall not cause harmful interference to this fixed service use and stations in the amateur service shall make all necessary adjustments (including termination of transmission) if harmful interference is caused.

**US251**--The band 12.75-13.25 GHz is also allocated to the Space Research Service (Deep Space) (space-to-Earth) for reception only at Goldstone, California. 35°18'N 116°54'W.

**US252**--The bands 2110-2120 and 7145-7190 MHz, 34.2-34.7 GHz are also allocated for Earth-to-space transmissions in the Space Research Service, limited to deep space communications at Goldstone, California.

**US253**--In the band 2300-2310 MHz, the fixed and mobile services shall not cause harmful interference to the amateur service.

**US254**--In the band 18.6-18.8 GHz, the fixed and mobile services shall be limited to a maximum equivalent isotopically radiated power of +35 dBw and the power delivered to the antenna shall not exceed -3 dBw.

**US255**--In the band 18.6-18.8 GHz, the fixed-satellite service shall be limited to a power flux density at the Earth's surface of -101 dBW/M<sup>2</sup> in a 200 MHz band for all angles of arrival.

**US256**--Radio astronomy observations may be made in the band 1718.8-1722.2 MHz on an unprotected basis. Agencies providing other services in this band in the geographic areas listed below should bear in mind that their operations may affect those observations, and those agencies are encouraged to minimize potential interference to the observations insofar as it is practicable.

Hat Creek Observatory Hat Creek, California	Rectangle between latitude 40°00'N and 42°00'N and between latitudes 120°15'W and 122°15'W.
Owens Valley Radio Observatory Big Pine, California	Two contiguous rectangles, one between 36°00'N and 37°00'N and between longitudes 117°40'W and 118°30'W and the second between latitudes 37°00'N and 30°00'N and between longitudes 118°00'W and 118°50'W.
Haystack Radio Observatory Tyngsboro, Massachusetts	Rectangle between latitude 41°00'N and 43°00'N and between longitudes 71°00'W and 73°00'W.
National Astronomy and Ionosphere Center Arecibo, Puerto Rico	Rectangle between latitude 17°30'N and 19°00'N and between longitudes 65°10'W and 68°00'W.
National Radio Astronomy Observatory Green Bank, West Virginia	Rectangle between latitude 37°30'N and 39°15'N and between longitudes 78°30'W and 80°30'W.

**US257**--Radio astronomy observations may be made in the 4950-4990 MHz band at certain Radio Astronomy Observatories indicated below:

National Astronomy and Ionosphere Center Arecibo, Puerto Rico	Rectangle between Latitudes 17°30'N and 19°00'N and between latitudes 65°10'W and 68°00'W.
Haystack Radio Observatory Tyngsboro, Massachusetts	Rectangle between latitudes 41°00'N and 43°00'N and between longitudes 71°00'W and 73°00'W.
National Radio Astronomy Observatory Green Bank, West Virginia	Rectangle between latitudes 37°00'N and 39°15'N and between longitudes 78°30'W and 80°30'W.
National Radio Astronomy Observatory Socorro, New Mexico	Rectangle between latitudes 32°30'N and 35°30'N and between longitudes 106°00'W and 109°00'W.

Owens Valley Radio Observatory Big Pine, California	Two contiguous rectangles, one between latitudes 36°00'N and 37°00'N and between longitudes 117°40'W and 118°30'W and the second between latitudes 37°00'N and 38°00'N and between longitudes 118°00'W and 118°50'W.
HatCreek Observatory Hat Creek, California	Rectangle between latitudes 40°00'N and 42°00'N and between longitudes 120°15'W and 122°15'W.

Every practicable effort will be made to avoid the assignment of frequencies in the band 4950-4990 MHz to stations in the fixed and mobile services within the geographic areas given above. In addition, every practicable effort will be made to avoid the assignment of frequencies in this band to stations in the aeronautical mobile service which operate outside of those geographic areas, but which may cause harmful interference to the listed observatories. Should such assignments result in harmful interference to these observatories, the situation will be remedied to the extent practicable.

**US258**--In the band 8025-8400 MHz, the non-Government earth exploration-satellite service (space-to-Earth) is allocated on a primary basis. Authorizations are subject to a case-by-case electromagnetic compatibility analysis.

**US259**--Stations in the radiolocation service in the band 17.3-17.7 GHz, shall be restricted to operating powers of less than 51 dBw eirp after feeder link stations for the broadcasting-satellite service are authorized and brought into use.

**US260**--Aeronautical mobile communications which are an integral part of aeronautical radio-navigation systems may be satisfied in the bands 1559-1626.5 MHz, 5000-5250 MHz and 15.4-15.7 GHz.

**US261**--The use of the band 4200-4400 MHz by the Aeronautical Radionavigation service is reserved exclusively for airborne radio altimeters. Experimental stations will not be autho-

rized to develop equipment for operational use in this band other than equipment related to altimeter stations. However, passive sensing in the Earth Exploration-Satellite and Space Research services may be authorized in this band on a secondary basis (no protection is provided from the radio altimeters).

**US262**--The band 31.8-32.3 GHz is also allocated for space-to-Earth transmissions in the Space Research Service, limited to deep space communications at Goldstone, California.

**US263**--In the frequency bands 21.2-21.4, 22.21-22.5, 36-37, 50.2-50.4, 54.25-58.2, 116-126, 150-151, 174.5-176.5, 200-202 and 235-238 GHz, the Space Research and the Earth Exploration-Satellite Services shall not receive protection from the Fixed and Mobile Services operating in accordance with the Table of Frequency Allocations.

**US264**--In the band 48.94-49.04 GHz, airborne stations shall not be authorized.

**US265**--In the band 10.6-10.68 GHz, the fixed service shall be limited to a maximum equivalent isotopically radiated power of 40 dBW and the power delivered to the antenna shall not exceed -3 dBW, per 250 kHz.

**US266**--Licensees in the Public Safety Radio Services holding a valid authorization on June 30, 1958, to operate in the frequency band 156.27-157.47 MHz or on the frequencies of 161.85, 161.91 or 161.97 MHz may, upon proper application, continue to be authorized for such operation, including expansion of existing systems, until such time as harmful interference is caused to the operation of any authorized station other than those licensed in the Public Safety Radio Service.

**US267**--In the band 902-928 MHz, amateur radio stations shall not operate within the States of Colorado and Wyoming, bounded by the area of: latitude 39° N to 42° N and longitude 103° W to 108° W.

**US268**--The bands 890-902 MHz and 928-942 MHz are also allocated to the radiolocation service for Government ship stations (off-shore ocean areas) on the condition that harmful inter-

ference is not caused to non-Government land mobile stations. The provisions of footnote US116 apply.

**US269**--In the band 2500-2690 MHz, applicants for space station assignments are urged to take all practicable steps to protect radio astronomy observations in the adjacent band, 2690-2700 MHz, from harmful interference. Further, all applicants are urged to coordinate their proposed systems through the Electromagnetic Spectrum Management Unit, National Science Foundation, Washington, D.C. 20550, prior to systems development.

**US270**--The band 72.77-72.91 GHz is also allocated to the radio astronomy service. Applicants for frequency assignments in this band are urged to take all practicable steps to protect radio astronomy observations from harmful interference.

**US271**--The use of the band 17.3-17.8 GHz by the Fixed-Satellite Service (Earth-to-space) is limited to feeder links for Broadcasting-Satellite Service.

**US272**--The allocation to the Maritime Mobile-Satellite Service in the band 1530-1535 MHz shall be effective from 1 January 1990. Up to that date the allocation to the Mobile Service will be on a primary basis.

**US273**--In the 74.6-74.8 MHz and 75.2-75.4 MHz bands, stations in the fixed and mobile services are limited to a maximum power of 1 watt from the transmitter into the antenna transmission line.

**US274**--In the 216-220 MHz band, fixed, aeronautical mobile, and land mobile stations are limited to telemetering and associated telecommand operations.

**US275**--The band 902-928 MHz is allocated on a secondary basis to the amateur service subject to not causing harmful interference to the operations of Government stations authorized in this band or to Location and Monitoring Service (LMS) systems. Stations in the Amateur service must tolerate any interference from the operations of industrial, scientific and medical (ISM) devices, LMS systems, and the operations of

Government stations authorized in this band. Further, the Amateur Service is prohibited in those portions of Texas and New Mexico bounded on the south by latitude 31° 41' North, on the east by longitude 104° 11' West, on the north by latitude 34° 30' North, and on the west by longitude 107° 30' West; in addition, outside this area but within 240 kilometers (150 miles) of these boundaries of White Sands Missile Range the service is restricted to a maximum transmitter peak envelope power output of 50 watts.

**US276**--Except as otherwise provided for herein, use of the band 2310-2390 MHz by the mobile service is limited to aeronautical telemetering and associated telecommand operations for flight testing of manned or unmanned aircraft, missiles or major components thereof. The following six frequencies are shared on a co-equal basis by Government and non-Government stations for telemetering and associated telecommand operations of expendable and re-usable launch vehicles whether or not such operations involve flight testing: 2312.5, 2332.5, 2352.5, 2364.5, 2370.5, and 2382.5 MHz. All other mobile telemetering uses shall be secondary to the above uses.

**US277**--The band 10.6-10.68 GHz is also allocated on a primary basis to the radio astronomy service. However, the radio astronomy service shall not receive protection from stations in the Fixed Service which are licensed to operate in the one hundred most populous urbanized areas as defined by the U.S. Census Bureau. The following radio astronomy sites have been coordinated for observations in this band: National Radio Astronomy Observatory, Green Bank, West Virginia (38 26 08N; 79 49 42W); National Radio Astronomy Observatory, Socorro, New Mexico (34 04 43N; 107 37 04W); Harvard Radio Astronomy Station, Fort Davis, Texas (30 38 08N; 103 56 42W); Hat Creek Observatory, Hat Creek, California (40 49 03N; 121 28 24W); Owens Valley Radio Observatory, Big Pine, California (37 13 54N; 118 17 36W); Naval Research Laboratory, Maryland

Point, Maryland (38 22 26N; 77 14 00W).

**US278**--In the 22.55-23.55 and 32-33 GHz bands, non-geostationary inter-satellite links may operate on a secondary basis to geostationary inter-satellite links.

**US279**--The frequency 2182 kHz may be authorized to fixed stations associated with the maritime mobile service for the sole purpose of transmitting distress calls and distress traffic, and urgency and safety signals and messages.

**US281**--In the band 25.07-25.11 MHz, non-Government stations in the Industrial Radio Services shall not cause harmful interference to, and must accept interference from, stations in the Maritime Mobile Service operating in accordance with the International Table of Frequency Allocations.

**US282**--In the band 4650-4700 kHz, frequencies may be authorized for non-Government communication with helicopters in support of off-shore drilling operations on the condition that harmful interference will not be caused to services operating in accordance with the Table of Frequency Allocations.

**US283**--In the bands 2850-3025 kHz, 3400-3500 kHz, 4650-4700 kHz, 5450-5680 kHz, 6525-6685 kHz, 10005-10100 kHz, 11275-11400 kHz, 13260-13360 kHz and 17900-17970 kHz frequencies in these bands may be authorized for non-Government flight test purposes on the condition that harmful interference will not be caused to services operating in accordance with the Table of Frequency Allocations.

**US284**--Until July 1, 1991, the carrier frequencies 6451.9 and 6455.0 kHz may be authorized to non-Government ship telephone and coast telephone stations operating in the Mississippi River maritime mobile service system on the condition that harmful interference will not be caused to services operating in accordance with the Table of Frequency Allocations and that any interference from such services must be accepted.

**US285**--Under exceptional circumstances, the carrier frequencies 2635, 2638, and 2738 kHz

may be authorized to coast stations.

**US287**--The band 14-14.5 GHz is also allocated to the non-Government land mobile-satellite service (Earth-to-space) on a secondary basis.

**US290**--In the band 1900-2000 kHz, amateur stations may continue to operate on a secondary basis to the Radiolocation Service, pending a decision as to their disposition through a future rule making proceeding in conjunction with implementation of the Standard Broadcasting Service in the 1625-1705 kHz band.

**US291**--Television pickup stations in the mobile service may be authorized to use frequencies in the band 38.6-40 GHz on a secondary basis to stations operating in accordance with the Table of Frequency Allocations.

**US292**--In the band 14.0-14.2 GHz stations in the radionavigation service shall operate on a secondary basis to the fixed-satellite service.

**US294**--In the spectrum below 490 kHz electric utilities operate Power Line Carrier (PLC) systems on power transmission lines for communications important to the reliability and security of electric service to the public. These PLC systems operate under the provisions of Part 15 of the Federal Communication Commission's Rules and Regulations or Chapter 7 of the National Telecommunications and Information Administration's Manual of Regulations and Procedures for Federal Radio Frequency Management, on an unprotected and noninterference basis with respect to authorized radio users. Notification of intent to place new or revised radio frequency assignments or PLC frequency uses in the bands below 490 kHz is to be made in accordance with the Rules and Regulations of the FCC and NTIA, and users are urged to minimize potential interference to the degree practicable. This footnote does not provide any allocation status to PLC radio frequency uses.

**US296**--Until July 1, 1991, in the bands designated for ship wideband telegraphy, facsimile and special transmission systems, the following assignable frequencies are available to non-Government stations on a shared basis with

Government stations: 2070.5, 2072.5, 2074.5, 2076.5, 4160.5, 4168, 6238.6, 6242.6, 8326, 8341.5, 12485, 12489, 16654, 16658, 22186, and 22190 kHz.

Effective July 1, 1991, in the bands designated for ship wide-band telegraphy, facsimile and special transmission systems, the following assignable frequencies are available to non-Government stations on a shared basis with Government stations: 2070.5, 2072.5, 2074.5, 2076.5, 4154, 4170, 6235, 6259, 8302, 8338, 12370, 12418, 16551, 16615, 18848, 18868, 22182, 22238, 25123, and 25159 kHz.

**US297**--The bands 47.2-49.2 GHz and 74.0-75.5 GHz are also available for feeder links for the broadcasting-satellite service.

**US298**--Channels 27555, 27615, 27635, 27655, 27765, and 27860 KHz are available to eligibles in the Forest Products Radio Service on a secondary basis to Government operations including experimental stations. Operations in the Forest Products Radio Service on these channels will not exceed 150 watts and are limited to the states of Washington, Oregon, Maine, North Carolina, South Carolina, Tennessee, Georgia, Florida, Alabama, Mississippi, Louisiana, and Texas (eastern portion).

**US299**--Until implementation procedures and schedules are determined by a future Regional Conference of the International Telecommunication Union the frequency bands 1615-1625 and 1625-1705 kHz in Alaska are also allocated to the maritime mobile services and the Alaska fixed service.

**US300**--The frequencies 169.445, 169.505, 170.245, 170.305, 171.045, 171.105, 171.845 and 171.905 MHz are available for wireless microphone operations on a secondary basis to Government and non-Government operations.

**US301**--Except as provided in US302, broadcast auxiliary stations licensed as of November 21, 1984, to operate in the band 942-944 MHz may continue to operate on a co-equal primary basis to other stations and services operating in the band in accordance with the Table of Frequency Allocations.

**US302**--The band 942-944 MHz in Puerto Rico is allocated as an alternative allocation to the fixed service for broadcast auxiliary stations only.

**US303**--In the band 2285-2290 MHz, non-Government space stations in the space research, space operations and earth exploration-satellite services may be authorized to transmit to the Tracking and Data Relay Satellite System subject to such conditions as may be applied on a case-by-case basis. Such transmissions shall not cause harmful interference to authorized Government stations. The power flux density at the Earth's surface from such non-Government stations shall not exceed  $-144$  to  $-154$  dBW/m<sup>2</sup>/4 kHz, depending on angle of arrival, in accordance with ITU Radio Regulation 2557.

**US307**--The sub-band 5150-5216 MHz is also allocated for space-to-Earth transmissions in the fixed-satellite service for feeder links in conjunction with the radiodetermination-satellite service operating in the bands 1610-1626.5 MHz and 2483.5-2500 MHz. The total power flux density at the earth's surface shall in no case exceed  $-159$  dBW/m<sup>2</sup> per 4 KHz for all angles of arrival.

**US308**--In the frequency bands 1549.5-1558.5 MHz and 1651-1660 MHz, the Aeronautical Mobile-Satellite (R) requirements that cannot be accommodated in the 1545-1549.5 MHz, 1558.5-1559 MHz, 1646.5-1651 MHz and 1660-1660.5 MHz bands shall have priority access with real-time preemptive capability for communications in the mobile-satellite service. Systems not interoperable with the aeronautical mobile-satellite (R) service shall operate on a secondary basis. Account shall be taken of the priority of safety-related communications in the mobile-satellite service.

**US309**--Transmissions in the bands 1545-1559 MHz from terrestrial aeronautical stations directly to aircraft stations, or between aircraft stations, in the aeronautical mobile (R) service are also authorized when such transmissions are used to extend or supplement the satellite-to-aircraft links. Transmissions in the band



1646.5-1660.5 MHz from aircraft stations in the aeronautical mobile (R) service directly to terrestrial aeronautical stations, or between aircraft stations, are also authorized when such transmissions are used to extend or supplement the aircraft-to-satellite links.

**US310**--In the band 14.896-15.121 GHz, non-Government space stations in the space research service may be authorized on a secondary basis to transmit to Tracking and Data Relay Satellites subject to such conditions as may be applied on a case-by-case basis. Such transmissions shall not cause harmful interference to authorized Government stations. The power flux density at the earth's surface from such non-Government stations shall not exceed  $-138$  to  $-148$  dBW/m<sup>2</sup>/4kHz, depending on the angle of arrival, in accordance with CCIR Recommendation 510-1.

**US311**--Radio astronomy observations may be made in the 1350-1400 MHz band on an unprotected basis at certain Radio Astronomy Observatories indicated below:

National Astronomy and Ionosphere Center Arecibo, Puerto Rico	Rectangle between latitudes 17° 30'N and 19°00'N and between longitudes 65°10'W and 68°00'W.	
National Radio Astronomy Observatory Socorro, New Mexico	Rectangle between latitudes 32°30'N and 35°30'N and between longitudes 106°00'W and 109° 00'W.	
National Radio Astronomy Observatory Green Bank, West Virginia	Rectangle between latitudes 37° 30'N and 39°15'N and between longitudes 78°30'W and 80°30'W.	
National Radio Astronomy Observatory Very Long Baseline Array Stations	80 kilometers (50 mile) radius centered on:	
	Latitude (North)	Longitude (West)
Pie Town, NM	34°18'	108°07'
Kitt Peak, AZ	31°57'	111°37'
Los Alamos, NM	35°47'	106°15'
Fort Davis, TX	30°38'	103°57'
North Liberty, IA	41°46'	91°34'
Brewster, WA	48°08'	119°41'
Owens Valley, CA	37°14'	118°17'

Saint Croix, VI	17°46'	64°35'
Mauna Kea, HI	19°48'	155°27'
Hancock, NH	42°56'	71°59'

Every practicable effort will be made to avoid the assignment of frequencies in the band 1350-1400 MHz to stations in the fixed and mobile services which could interfere with radio astronomy observations within the geographic areas given above. In addition, every practicable effort will be made to avoid assignment of frequencies in this band to stations in the aeronautical mobile service which operate outside of those geographic areas, but which may cause harmful interference to the listed observatories. Should such assignments result in harmful interference to these observatories, the situation will be remedied to the extent practicable.

**US312**--The frequency 173.075 MHz may also be authorized on a primary basis to non-Government stations in the Police Radio Service (with a maximum authorized bandwidth of 20 kHz) for stolen vehicle recovery systems.

**US315**--In the frequency bands 1530-1544 MHz and 1626.5-1645.5 MHz maritime mobile-satellite distress and safety communications, e.g., GMDSS, shall have priority access with real-time preemptive capability in the mobile-satellite service. Communications of mobile-satellite system stations not participating in the GMDSS shall operate on a secondary basis to distress and safety communications of stations operating in the GMDSS. Account shall be taken of the priority of safety-related communications in the mobile-satellite service.

**US316**--The band 2900-3000 MHz is also allocated on a primary basis to the Meteorological Aids Service. Operations in this service are limited to Government Next Generation Weather Radar (NEXRAD) systems where accommodation in the 2700-2900 MHz band is not technically practical and are subject to coordination with existing authorized stations.

**US317**--The band 218.0-219.0 MHz is allocated

on a primary basis to the Interactive Video and Data Operations.

**US318**--Until January 1, 2000, the use of the 137-138 MHz band by the mobile-satellite service will be secondary to Government operations within the subbands: 137.333-137.367, 137.485-137.515, 137.605-137.635 and 137.753-137.787 MHz.

**US319**--In the 137-138, 148-149.9, 149.9-150.05, 399.9-400.05, 400.15-401, 1610-1626.5, and 2483.5-2500 MHz bands, Government stations in the mobile-satellite service shall be limited to earth stations operating with non-Government space stations.

**US320**--Use of the 137-138, 148-149.9, and 400.15-401 MHz bands by the mobile-satellite service is limited to non-voice, non-geostationary satellite systems and may include satellite links between land earth stations at fixed locations.

**US322**--The 149.9-150.05 MHz band is allocated to the mobile-satellite service (Earth-to-space) on a primary basis after January 1, 1997 and shall be limited to non-voice, non-geostationary satellite systems, including satellite links between land earth stations. Before January 1, 1997 use of this band on a secondary basis for the mobile satellite service is allowed for land earth stations at fixed locations.

**US323**--In the 148-149.9 MHz band, no individual mobile earth station shall transmit, on the same frequency being actively used by fixed and mobile stations and shall transmit no more than 1% of the time during any 15 minute period; except, individual mobile earth stations in this band that do not avoid frequencies actively being used by the fixed and mobile services shall not exceed a power density of -16 dBW/4kHz and shall transmit no more than 0.25% of the time during any 15 minute period. Any single transmission from any individual mobile earth station operating in this band shall not exceed 450 ms in duration and consecutive transmissions from a single mobile earth station on the same frequency shall be separated by at

least 15 seconds. Land earth stations in this band shall be subject to electromagnetic compatibility analysis and coordination with fixed and mobile stations.

**US324**--Government and non-Government satellite systems in the 400.15-401 MHz band shall be subject to electromagnetic compatibility analysis and coordination.

**US325**--In the band 148-149.9 MHz fixed and mobile stations shall not claim protection from land earth stations in the mobile-satellite service that have been previously coordinated; Government fixed and mobile stations exceeding 27 dBW EIRP, or an emission bandwidth greater than 38 kHz, will be coordinated with existing mobile-satellite service space stations.

**US326**--The 399.9-400.05 MHz band is allocated to the mobile-satellite service (Earth-to-space) on a primary basis after January 1, 1997 and shall be limited to non-voice, non-geostationary satellite systems, including satellite links between land earth stations.

**US327**--The band 2310-2360 MHz is allocated to the broadcasting-satellite service (sound) and complementary terrestrial broadcasting service on a primary basis. Such use is limited to digital audio broadcasting and is subject to the provisions of Resolution 528.

**US328**--In the band 2310-2360 MHz, the mobile and radiolocation services are allocated on a primary basis until 1 January 1997 or until broadcasting-satellite (sound) service has been brought into use in such a manner as to affect or be affected by the mobile and radiolocation services in those service areas, whichever is later. The broadcasting-satellite (sound) service during implementation should also take cognizance of the expendable and reusable launch vehicle frequencies 2312.5, 2332.5, and 2352.5 MHz, to minimize the impact on this mobile service use to the extent possible.

**US331**--In the frequency band 1850-1990 MHz, the only fixed PCS services permitted are ancillary services used in support of mobile personal communications services.

**US334**--In the band 17.8-20.2 GHz, Government

space stations and associated earth stations in the fixed-satellite (space-to-Earth) service may be authorized on a primary basis. For a Government geo-stationary satellite network to operate on a primary basis, the space station shall be located outside the arc measured from East to West, 70° W to 120° W. Coordination between Government fixed-satellite systems and non-Government systems operating in accordance with the United States Table of Frequency Allocations is required.

### International Footnotes

(These footnotes come from the Radio Regulations, Geneva 1982)

**444**--Administrations authorizing the use of frequencies below 9 kHz shall ensure that no harmful interference is caused thereby to the services to which the bands above 9 kHz are allocated (see No. 1816).

**445**--Administrations conducting scientific research using frequencies below 9 kHz are urged to advise other administrations that may be concerned in order that such research may be afforded all practicable protection from harmful interference.

**446**--*Additional allocation*: in Bulgaria, the German Democratic Republic, Czechoslovakia and the U.S.S.R., the band 14-17 kHz is also allocated to the radio navigation service on a permitted basis. (**WARC-92**)

**447**--The stations of services to which the bands 14-19.95 kHz and 20.05-70 kHz and in Region 1 also the bands 72-84 kHz and 86-90 kHz are allocated may transmit standard frequency and time signals. Such stations shall be afforded protection from harmful interference. In Bulgaria, Mongolia, Czechoslovakia and the U.S.S.R., the frequencies 25 kHz and 50 kHz will be used for this purpose under the same conditions. (**WARC-92**)

**448**--The use of the bands 14-19.95 kHz, 20.05-70 kHz and 70-90 kHz (72-84 kHz and 86-90

kHz in Region 1) by the maritime mobile service is limited to coast radiotelegraph stations (A1A and F1B only). Exceptionally, the use of class J2B or J7B emissions is authorized subject to the necessary bandwidth not exceeding that normally used for class A1A or F1B emissions in the band concerned. (**Mob-87**)

**449**--*Additional allocation*: in Bulgaria, Poland, the German Democratic Republic, Czechoslovakia and the U.S.S.R., the band 67-70 kHz is also allocated to the radionavigation service on a permitted basis. (**WARC-92**)

**450**--Different category of service: in Bangladesh, Iran and Pakistan, the allocation of the bands 70-72 kHz and 84-86 kHz to the fixed and maritime mobile service is on a primary basis (see No. 425).

**451**--In the bands 70-90 kHz (70-86 kHz in Region 1) and 110-130 kHz (112-130 kHz in Region 1), pulsed radionavigation systems may be used on condition that they do not cause harmful interference to other services to which these bands are allocated. (**Mob-87**)

**452**--In Region 2, the establishment and operation of stations in the maritime radionavigation service in the band 70-90 kHz and 110-130 kHz shall be subject to agreement obtained under the procedure set forth in Article 14 with administrations whose services, operating in accordance with the Table, may be affected. However, stations of the fixed, maritime mobile and radiolocation services shall not cause harmful interference to stations in the maritime radionavigation service established under such agreements.

**453**--Administrations which operate stations in the radionavigation service in the band 90-110 kHz are urged to coordinate technical and operating characteristics in such a way as to avoid harmful interference to the services provided by these stations.

**453A**--In the band 90-110 kHz, the United Kingdom may continue to use its coast radiotelegraph stations in operation on 14 September 1987, on a secondary basis. (**Mob-87**)

**454**--Only classes A1A or F1B, A2C, A3C, F1C or F3C emissions are authorized for stations of the fixed service in the bands allocated to this service between 90 kHz and 160 kHz (148.5 kHz in Region 1) and for stations of the maritime mobile service in the bands allocated to this service between 110 kHz and 160 kHz (148.5 kHz in Region 1). Exceptionally, class J2B or J7B emissions are also authorized in the bands between 110 kHz and 160 kHz (148.5 kHz in Region 1) for stations of the maritime mobile service.

**455**--*Different category of service*: in Bangladesh, Iran and Pakistan, the allocation of the bands 112-117.6 kHz and 126-129 kHz to the fixed and maritime mobile services is on a primary basis (see No. 425).

**456**--*Different category of service*: in the Federal Republic of Germany, the allocation of the band 115-117.6 kHz to the fixed and maritime mobile services is on a primary basis (see No. 425) and to the radionavigation service on a secondary basis (see No. 424).

**457**--*Additional allocation*: in Bulgaria, Mongolia, Poland, the German Democratic Republic, Romania, Czechoslovakia and the U.S.S.R., the band 130-148.5 kHz is also allocated to the radio-navigation service on a secondary basis. Within and between these countries this service shall have an equal right to operate. **(WARC-92)**

**459**--In the Region 2 polar areas (north of 60°N and south of 60°S), which are subject to auroral disturbances, the aeronautical fixed service is the primary service in the band 160-190 kHz.

**460**--*Alternative allocation*: in Angola, Botswana, Burundi, the Congo, Malawi, Rwanda, South Africa and Zaire, the band 160-200 kHz is allocated to the fixed service on a primary basis.

**461**--*Additional allocation*: in Somalia, the band 200-255 kHz is also allocated to the aeronautical radionavigation service on a primary basis.

**462**--*Alternative allocation*: in Angola, Botswana, Burundi, Cameroon, the Central African Republic, the Congo, Ethiopia, Kenya, Lesotho, Madagascar, Malawi, Mozambique, Namibia,

Nigeria, Oman, Rwanda, South Africa, Swaziland, Tanzania, Chad, Zaire, Zambia and Zimbabwe, the band 200-283.5 kHz is allocated to the aeronautical radionavigation service on a primary basis.

**463**--*Different category of service*: in Sudan and Yemen (P.D.R. of), the allocation of the band 255-283.5 kHz to the aeronautical radionavigation service is on a primary basis (see No. 425).

**464**--*Alternative allocation*: in Tunisia, the band 255-283.5 kHz is allocated to the broadcasting service on a primary basis.

**465**--Norwegian stations of the fixed service situated in northern areas (north of 60°N) subject to auroral disturbances are allowed to continue operation on four frequencies in the bands 283.5-490 kHz and 510-526.5 kHz.

**466**--In the band 285-325 kHz (283.5-325 kHz in Region 1), in the maritime radionavigation service, radiobeacon stations may also transmit supplementary navigational information using narrowband techniques, on condition that the prime function of the beacon is not significantly degraded.

**466A**--*Additional Allocation*: in Region 1, the frequency band 285.3-285.7 kHz is also allocated to the maritime radionavigation service (other than radiobeacons) on a permitted basis. **(Mob-87)**

**467**--*Different category of service*: in the U.S.S.R. and the Black Sea areas of Bulgaria, Romania and Turkey, the allocation of the band 315-325 kHz to the maritime radionavigation service is on a primary basis (see No. 425) under the following conditions:

(a) in the Black Sea and White Sea areas, the maritime radionavigation service is the primary service and the aeronautical radionavigation service is the permitted service;

(b) in the Baltic Sea area, the assignment of frequencies in this band to new stations in the maritime or aeronautical radionavigation services shall be subject to prior consultation between the administrations concerned.

**468**--The frequency 410 kHz is designated for

radio direction-finding in the maritime radio-navigation service. The other radionavigation services to which the band 405-415 kHz is allocated shall not cause harmful interference to radio direction-finding in the band 406.5-413.5 kHz.

**469--Different category of service:** in Afghanistan, Australia, China, the French Overseas Territories of Region 3, India, Indonesia, the Islamic Republic of Iran, Japan, Pakistan, Papua New Guinea and Sri Lanka, the allocation of the band 415-495 kHz to the aeronautical radionavigation service is on a permitted basis. Administrations in these countries shall take all practical steps necessary to ensure that aeronautical radionavigation stations in the band 435-495 kHz do not cause interference to reception by coast stations of ship stations transmitting on frequencies designated for ship stations on a world-wide basis (see No. 4237). **(Mob-87)**

**469A--Different category of service:** in Cuba, the United States of America, and Mexico the allocation of the band 415-435 kHz to the aeronautical radionavigation service is on a primary basis. **(Mob-87)**

**470--**The use of the bands 415-495 kHz and 505-526.5 kHz (505-510 kHz in Region 2) by the maritime mobile service is limited to radiotelegraphy.

**470A--**In Region 2, the use of the band 435-495 kHz by the aeronautical radionavigation service is limited to non-directional beacons not employing voice transmission. **(Mob-87)**

**471--**The bands 490-495 kHz and 505-510 kHz shall be subject to the provisions of No. 3018 until the entry into force of the reduced guard-band in accordance with Resolution 210 (Mob-87).

**472--**The frequency 500 kHz is the international distress and calling frequency for Morse radiotelegraphy. The conditions for its use are prescribed in Articles 37, 38, N 38 and 60. **(Mob-87)**

**472A--**In the maritime mobile service, the frequency 490 kHz is, from the date of full imple-

mentation of the GMDSS (see Resolution 331 (Mob-87)), to be used exclusively for the transmission by coast stations of navigational and meteorological warnings and urgent information to ships, by means of narrowband direct-printing telegraphy. The conditions for use of the frequency 490 kHz are prescribed in Articles N 38 and 60, and Resolution 329 (Mob-87). In using the band 415-495 kHz for the aeronautical radionavigation service, administrations are requested to ensure that no harmful interference is caused to the frequency 490 kHz. **(Mob-87)**

**474--**The conditions for the use of frequency 518 kHz by the maritime mobile service are prescribed in Articles 38, N38 and 60 (see Resolution 324 (Mob-87) and Article 14A). **(Mob-87)**

**476--Additional allocation:** in the United Kingdom, the band 519.5-526.5 kHz is also allocated to the broadcasting service on a secondary basis for the transmission of public utility information.

**477--**In Region 2, in the band 525-535 kHz the carrier power of broadcasting stations shall not exceed 1 kW during the day and 250 W at night.

**478--Additional allocation:** in Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe, the band 526.5-535 kHz is also allocated to the mobile service on a secondary basis.

**479--Additional allocation:** in China, the band 526.5-535 kHz is also allocated to the aeronautical radionavigation service on a secondary basis.

**480--**In Region 2, the use of the band 1605-1705 kHz by stations of the broadcasting service is subject to the plan established by the Regional Administrative Radio Conference (Rio de Janeiro, 1988.)

In Region 2, in the band 1625-1705 kHz, the relationship between the broadcasting, fixed and mobile services is shown in No. 419. However, the examination of frequency assignments to stations of the fixed and mobile services in the band 1625-1705 kHz under No. 1241 shall take account of the allotments

appearing in the Plan established by the Regional Administrative Radio Conference (Rio de Janeiro, 1988) (**Orb-88**)

**480A**--In the band 1605-1705 kHz, in cases where a broadcasting station of Region 2 is concerned, the service area of the maritime mobile stations in Region 1 shall be limited to that provided by ground-wave propagation. (**Mob-87**)

**482**--*Additional allocation:* in Australia, Indonesia, New Zealand, the Philippines, Singapore, Sri Lanka and Thailand, the band 1606.5-1705 kHz is also allocated to the broadcasting service on a secondary basis.

**483**--*Different category of service:* in Bulgaria, Hungary, Mongolia, Nigeria, Poland, the German Democratic Republic, Chad, Czechoslovakia and the U.S.S.R., the allocation of the bands 1606.5-1625 kHz, 1635-1800 kHz and 2107-2160 kHz to the fixed and land mobile services is on a primary basis (see No. 425).

**484**--Some countries of Region 1 use radiodetermination systems in the bands 1606.5-1625 kHz, 1635-1800 kHz, 1850-2160 kHz, 2194-2300 kHz, 2502-2850 kHz and 3500-3800 kHz. The establishment and operation of such systems are subject to agreement obtained under the procedures set forth in Article 14. The radiated mean power of these stations shall not exceed 50 W.

**485**--*Additional allocation:* in Angola, Bulgaria, Hungary, Mongolia, Nigeria, Poland, the German Democratic Republic, Chad, Czechoslovakia and the U.S.S.R., the bands 1625-1635 kHz, 1800-1810 kHz and 2160-2170 kHz are also allocated to the fixed and land mobile services on a primary basis subject to agreement obtained under the procedure set forth in Article 14.

**486**--In Region 1, in the bands 1625-1635 kHz, 1800-1810 kHz and 2160-2170 kHz (except in the countries listed in No. 485 and those listed in No. 499 for the band 2160-2170 kHz), existing stations in the fixed and mobile except aeronautical mobile, services (and stations of the aeronautical mobile (OR) service in the band

2160-2170 kHz) may continue to operate on a primary basis until satisfactory replacement assignments have been found and implemented in accordance with Resolution 38.

**487**--In Region 1, the establishment and operation of stations of the radiolocation service in the bands 1625-1635 kHz, 1800-1810 kHz and 2160-2170 kHz shall be subject to agreement obtained under the procedure set forth in Article 14 (see also No. 486). The radiated mean power of radiolocation stations shall not exceed 50 W. Pulse systems are prohibited.

**488**--In the Federal Republic of Germany, Denmark, Finland, Hungary, Ireland, Israel, Jordan, Malta, Norway, Poland, the German Democratic Republic, the United Kingdom, Sweden, Czechoslovakia and the U.S.S.R., administrations may allocate up to 200 kHz to their amateur service in the bands 1715-1800 kHz and 1850-2000 kHz. However, when allocating the bands within this range to their amateur service, administrations shall, after prior consultations with administrations of neighboring countries, take such steps as may be necessary to prevent harmful interference from their amateur service to the fixed and mobile services of other countries. The mean power of any amateur station shall not exceed 10 W.

**489**--In Region 3, the Loran system operates either on 1850 kHz or 1950 kHz, the bands occupied being 1825-1875 kHz and 1925-1975 kHz, respectively. Other services to which the band 1800-2000 kHz is allocated may use any frequency therein on condition that no harmful interference is caused to the Loran system operating on 1850 kHz or 1950 kHz. (**Mob-87**)

**490**--*Alternative allocation:* in the Federal Republic of Germany, Angola, Austria, Belgium, Bulgaria, Cameroon, the Congo, Denmark, Egypt, Spain, Ethiopia, France, Greece, Italy, the Lebanon, Luxembourg, Malawi, the Netherlands, Portugal, Syria, the German Democratic Republic, Somalia, Tanzania, Tunisia, Turkey and the U.S.S.R., the band 1810-1830 kHz is allocated to the fixed and mobile, except aéro-

nautical mobile, services on a primary basis.

**491--Additional allocation:** in Saudi Arabia, Iraq, Israel, Libya, Poland, Romania, Chad, Czechoslovakia, Togo and Yugoslavia, the band 1810-1830 kHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

**492--**In Region 1, the use of the band 1810-1850 kHz by the amateur service is subject to the condition that satisfactory replacement assignments have been found and implemented in accordance with Resolution 38, for frequencies to all existing stations of the fixed and mobile, except aeronautical mobile, services operating in this band (except for the stations of the countries listed in Nos. 490, 491 and 493). On completion of satisfactory transfer, the authorization to use the band 1810-1830 kHz by the amateur service in countries situated totally or partially north of 40°N shall be given only after consultation with the countries mentioned in Nos. 490 and 491 to define the necessary steps to be taken to prevent harmful interference between amateur stations and stations of other services operating in accordance with Nos. 490 and 491.

**493--Alternative allocation:** in Burundi and Lesotho, the band 1810-1850 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

**494--Alternative allocation:** in Argentina, Bolivia, Chile, Mexico, Paraguay, Peru, Uruguay and Venezuela, the band 1850-2000 kHz is allocated to the fixed, mobile except aeronautical mobile, radiolocation and radio-navigation services on a primary basis.

**495--**In Region 1, in making assignments to stations in the fixed and mobile services in the bands 1850-2045 kHz, 2194-2498 kHz, 2502-2625 kHz and 2650-2850 kHz, administrations should bear in mind the special requirements of the maritime mobile service.

**496--**In Region 1, the use of the band 2025-2045 kHz by the meteorological aids service is limited to oceanographic buoy stations.

**497--**In Region 2, except in Greenland, coast

stations and ship stations using radiotelephony in the band 2065-2107 kHz shall be limited to class R3E or J3E emissions and to a peak envelope power not exceeding 1 kW. Preferably, the following carrier frequencies should be used: 2065.0 kHz, 2079.0 kHz, 2082.5 kHz, 2086.0 kHz, 2093.0 kHz, 2096.5 kHz, 2100.0 kHz and 2103.5 kHz. In Argentina, Brazil and Uruguay, the carrier frequencies 2068.5 kHz and 2075.5 kHz are also used for this purpose, while the frequencies within the band 2072-2075.5 kHz are used as provided in No. 4323 BD. **(Mob-87)**

**498--**In Regions 2 and 3, provided no harmful interference is caused to the maritime mobile service, the frequencies between 2065 kHz and 2107 kHz may be used by stations of the fixed service communicating only within national borders and whose mean power does not exceed 50 W. In notifying the frequencies, the attention of the International Frequency Registration Board should be drawn to these provisions.

**499--Additional allocation:** in Saudi Arabia, Botswana, Ethiopia, Iraq, Lesotho, Libya, Malawi, Somalia, Swaziland and Zambia, the band 2160-2170 kHz is also allocated to the fixed and mobile, except aeronautical mobile (R), services on a primary basis. The mean power of stations in these services shall not exceed 50 W.

**500--**The carrier frequency 2182 kHz is an international distress and calling frequency for radiotelephony. The conditions for the use of the band 2173.5-2190.5 kHz are prescribed in Articles 37, 38, N 38 and 60. **(Mob-87)**

**500A--**The frequencies 2187.5 kHz, 4207.5 kHz, 6312 kHz, 8414.5 kHz, 12577 kHz and 16804.5 kHz are international distress frequencies for digital selective calling. The conditions for the use of these frequencies are prescribed in Article N 38. **(Mob-87)**

**500B--**The frequencies 2174.5 kHz, 4177.5 kHz, 6268 kHz, 8376.5 kHz, 12520 kHz and 16695 kHz are international distress frequencies for narrow-band direct-printing telegraphy. The conditions for the use of these frequencies are prescribed in Article N 38. **(Mob-87)**

**501--**The carrier frequencies 2182 kHz, 3023

kHz, 5680 kHz, 8364 kHz, and the frequencies 121.5 MHz, 156.8 MHz and 243 MHz may also be used, in accordance with the procedures in force for terrestrial radiocommunication services, for search and rescue operations concerning manned space vehicles. The conditions for the use of the frequencies are prescribed in Articles 38 and N 38.

The same applies to the frequencies 10003 kHz, 14 993 kHz and 19 993 kHz, but in each of these cases emissions must be confined in a band of  $\pm 3$  kHz about the frequency. **(Mob-87)**

**502--Alternative allocation:** in Belgium, Cyprus, Denmark, Spain, France, Greece, Iceland, Italy, Malta, Norway, the Netherlands, Portugal, the United Kingdom, Singapore, Sri Lanka, Sweden, Turkey and Yugoslavia, the band 2194-2300 kHz is allocated to the maritime mobile service on a primary basis and to the fixed and land mobile services on a permitted basis.

**503--**For the conditions for the use of the bands 2300-2495 kHz (2498 kHz in Region 1), 3200-3400 kHz, 4750-4995 kHz and 5005-5060 kHz by the broadcasting service, see Nos. 406 to 410, 411 and 2666 to 2673.

**504--Alternative allocation:** in Belgium, Cyprus, Denmark, Spain, France, Greece, Iraq, Italy, Malta, Norway, the Netherlands, Portugal, the United Kingdom, Sweden, Turkey and Yugoslavia, the band 2502-2625 kHz is allocated to the maritime mobile service on a primary basis and to the fixed and land mobile services on a permitted basis.

**505--**The carrier (reference) frequencies 3023 kHz and 5680 kHz may also be used, in accordance with Articles 38 and N 38, by stations of the maritime mobile service engaged in coordinated search and rescue operations. **(Mob-87)**

**506--**Administrations are urged to authorize the use of the band 3155-3195 kHz to provide a common worldwide channel for low power wireless hearing aids. Additional channels for these devices may be assigned by administrations in the bands between 3155 kHz and 3400

kHz to suit local needs.

It should be noted that frequencies in the range 3000 kHz to 4000 kHz are suitable for hearing aid devices which are designed to operate over short distances within the induction field.

**507--Alternative allocation:** in Belgium, Cameroon, Cyprus, the Ivory Coast, Denmark, Egypt, Spain, France, Greece, Iceland, Italy, Liberia, Malta, Norway, the Netherlands, the United Kingdom, Singapore, Sri Lanka, Sweden, Togo, Turkey and Yugoslavia, the band 3155-3200 kHz is allocated to the maritime mobile service on a primary basis and to the fixed and land mobile services on a permitted basis.

**508--Additional allocation:** in Australia, Brazil, Canada, the United States, Japan, Mexico, New Zealand, Peru and Uruguay, the band 3230-3400 kHz is also allocated to the radiolocation service on a secondary basis.

**509--Additional allocation:** in Honduras, Mexico, Peru and Venezuela, the band 3500-3750 kHz is also allocated to the fixed and mobile services on a primary basis.

**510--**For the use of the bands allocated to the amateur service at 3.5 MHz, 7.0 MHz, 10.1 MHz, 14.0 MHz, 18.068 MHz, 21.0 MHz, 24.89 MHz and 144 MHz in the event of natural disasters, see Resolution 640.

**511--Additional allocation:** in Brazil, the band 3700-4000 kHz is also allocated to the radiolocation service on a primary basis.

**512--Alternative allocation:** in Argentina, Bolivia, Chile, Ecuador, Paraguay, Peru and Uruguay, the band 3750-4000 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

**513--Alternative allocation:** in Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe, the band 3900-3950 kHz is allocated to the broadcasting service on a primary basis. The use of this band by the broadcasting service is subject to agreement obtained under the procedure set forth in Article 14 with neighboring countries having services operating in accordance with



the Table.

**514--Additional allocation:** in Canada, the band 3950-4000 kHz is also allocated to the broadcasting service on a primary basis. The power of broadcasting stations operating in this band shall not exceed that necessary for a national service within the frontier of this country and shall not cause harmful interference to other services operating in accordance with the Table.

**515--Additional allocation:** in Greenland, the band 3950-4000 kHz is also allocated to the broadcasting service on a primary basis. The power of the broadcasting stations operating in this band shall not exceed that necessary for a national service and shall in no case exceed 5 kW.

**516--**In Region 3, the stations of those services to which the band 3995-4005 kHz is allocated may transmit standard frequency and time signals.

**517--**The use of the band 4000-4063 kHz by the maritime mobile service is limited to ship stations using radiotelephony (see No. 4374 and Appendix 16). (**Mob-87**)

**518--**In Afghanistan, Argentina, Australia, Botswana, Burkina Faso, China, India, Niger, Central African Republic, Chad and the U.S.S.R., in the bands 4063-4123 kHz, 4130-4133 kHz and 4408-4438 kHz, stations of limited power in the fixed service which are situated at least 600 km from the coast may operate on condition that harmful interference is not caused to the maritime mobile service. (**WARC-92**)

**519--**On condition that harmful interference is not caused to the maritime mobile service, the frequencies in the bands 4063-4123 kHz and 4130-4438 kHz may be used exceptionally by stations in the fixed service communicating only within the boundary of the country in which they are located with a mean power not exceeding 50 W.

**520--**The conditions for the use of the carrier frequencies 4125 kHz and 6215 kHz are prescribed in Articles 37, 38, N 38 and 60. (**Mob-87**)

**520A--**The frequency 4209.5 kHz is used exclusively for the transmission by coast stations of meteorological and navigational warnings and urgent information to ships by means of narrow-band direct-printing techniques (see Resolution 332 (**Mob-87**)).

**520B--**The frequencies 4210 kHz, 6314 kHz, 8416.5 kHz, 12579 kHz, 16806.5 kHz, 19680.5 kHz, 22376 kHz and 26100.5 kHz are the international frequencies for the transmission of Maritime Safety Information (MSI) (see Resolution 333 (**Mob-87**) and Appendix 31).

**521--Different category of service:** in the U.S.S.R., the allocation of the band 5 130-5 250 kHz to the mobile, except aeronautical mobile, service is on a primary basis (see No. 425).

**521A--**The use of the bands 5900-5950 kHz, 7300-7350 kHz, 9400-9500 kHz, 11600-11650 kHz, 12050-12100 kHz, 13570-13600 kHz, 13800-13870 kHz, 15600-15800 kHz, 17480-17550 kHz and 18900-19020 kHz by the broadcasting service is limited to single-sideband emissions with the characteristics specified in Appendix 45 to the Radio Regulations. (**WARC-92**)

**521B--**The use of the bands 5900-5950 kHz, 7300-7350 kHz, 9400-9500 kHz, 11600-11650 kHz, 12050-12100 kHz, 13570-13600 kHz, 13800-13870 kHz, 15600-15800 kHz, 17480-17550 kHz and 18900-19020 kHz by the broadcasting service shall be subject to the planning procedures to be drawn up by a competent world administrative radio conference. (**WARC-92**)

**521C--**The band 5900-5950 kHz is allocated, until 1 April 2007, to the fixed service on a primary basis, as well as to the following services: in Region 1 to the land mobile service on a primary basis, in Region 2 to the mobile except aeronautical mobile (R) service on a primary basis, and in Region 3 to the mobile except aeronautical mobile (R) service on a secondary basis, subject to application of the procedure referred to in Resolution 21. After 1 April 2007, frequencies in these bands may be used by stations in the above-mentioned services, communicating only within the boundary of the

country in which they are located, on the condition that harmful interference is not caused to the broadcasting service. When using frequencies in these services, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations. **(WARC-92)**

**522--**On condition that harmful interference is not caused to the maritime mobile service, the bands 6200-6213.5 kHz and 6220.5-6525 kHz may be used exceptionally by stations in the fixed service, communicating only within the boundary of the country in which they are located, with a mean power not exceeding 50 W. At the time of notification of these frequencies, the attention of the International Frequency Registration Board will be drawn to the above conditions.

**524--**The band 6 765-6 795 kHz (center frequency 6 780 kHz) is designated for industrial, scientific and medical (ISM) applications. The use of this frequency band for ISM applications shall be subject to special authorization by the administration concerned, in agreement with other administrations whose radiocommunication services might be affected. In applying this provision, administrations shall have due regard to the latest relevant CCIR Recommendations.

**525--*Different category of service:*** in Mongolia and the U.S.S.R., the allocation of the band 6765-7000 kHz to the land mobile service is on a primary basis (see No. 425).

**526--*Additional allocation:*** in Angola, Iraq, Kenya, Rwanda, Somalia and Togo, the band 7000-7050 kHz is also allocated to the fixed service on a primary basis.

**527--*Alternative allocation:*** in Egypt, Ethiopia, Guinea, Libya, Madagascar, Malawi and Tanzania, the band 7000-7050 kHz is allocated to the fixed service on a primary basis.

**528--**The use of the band 7 100-7 300 kHz in Region 2 by the amateur service shall not impose constraints on the broadcasting service

intended for use within Region 1 and Region 3.

**528A--**The band 7300-7350 kHz is allocated, until 1 April 2007, to the fixed service on a primary basis and to the land mobile service on a secondary basis, subject to application of the procedure referred to in Resolution 21. After 1 April 2007, frequencies in this band may be used by stations in the above-mentioned services, communicating only within the boundary of the country in which they are located, on condition that harmful interference is not caused to the broadcasting service. When using frequencies in these services, administration are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations. **(WARC-92)**

**529--**In Region 3, the stations of those services to which the band 7995-8005 kHz is allocated may transmit standard frequency and time signals.

**529A--**The conditions for the use of the carrier frequencies 8291 kHz, 12290 kHz and 16420 kHz are prescribed in Articles 38, N 38 and 60. **(Mob-87)**

**529B--**The bands 9400-9500 kHz, 11600-11650 kHz, 12050-12100 kHz, 15600-15800 kHz, 17480-17550 kHz and 18900-19020 kHz are allocated to the fixed service on a primary basis until 1 April 2007, subject to application of the procedure referred to in Resolution 21. After 1 April 2007, frequencies in this band may be used by stations in the fixed service, communicating only within the boundary of the country in which they are located, on condition that harmful interference is not caused to the broadcasting service. When using frequencies in the fixed service, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations. **(WARC-92)**

**530--**On condition that harmful interference is not caused to the broadcasting service, frequen-

cies in the bands 9775-9900 kHz, 11650-11700 kHz and 11975-12050 kHz may be used by stations in the fixed service communicating only within the boundary of the country in which they are located, each station using a total radiated power not exceeding 24 dBW.

**531**--The bands 9775-9900 kHz, 11650-11700 kHz, 11975-12050 kHz, 13600-13800 kHz, 15450-15600 kHz, 17550-17700 kHz and 21750-21850 kHz are allocated to the fixed service on a primary basis subject to the procedure described in Resolution 8. The use of these bands by the broadcasting service shall be subject to provisions established by the World Administrative Radio Conference for the Planning of HF Bands Allocated to the Broadcasting Service (see Resolution 508). The provisions of Resolution 512 (HFBC-87) also apply. Within these bands, the date of commencement of operations in the broadcasting service on a planned channel shall not be earlier than the date of completion of satisfactory transfer, according to the procedures described in Resolution 8, of all assignments to stations in the fixed service operating in accordance with the Table and other provisions of the Radio Regulations, which are recorded in the Master Register and which may be affected by broadcasting operations on that channel. **(HFBC-87)**

**533**--In making assignments to stations of other services to which the band 13 360-13 410 kHz is allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).

**534**--The band 13 553-13 567 kHz (center frequency 13 560 kHz) is designated for industrial, scientific and medical (ISM) applications. Radiocommunication services operating within this band must accept harmful interference which may be caused by these applications. ISM equipment operating in this band is subject to the provisions of No. 1815.

**534A**--The bands 13570-13600 kHz and 13800-13870 kHz are allocated, until 1 April 2007, to the fixed service on a primary basis and to the mobile except aeronautical mobile (R) service on a secondary basis, subject to application of the procedure referred to in Resolution 21. After 1 April 2007, frequencies in these bands may be used by stations in the above-mentioned services, communicating only within the boundary of the country in which they are located, on the condition that harmful interference is not caused to the broadcasting service. When using frequencies in these services, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations. **(WARC-92)**

**535**--*Additional allocation*: in Afghanistan, China, the Ivory Coast, Iran and the U.S.S.R., the band 14 250-14 350 kHz is also allocated to the fixed service on a primary basis. Stations of the fixed service shall not use a radiated power exceeding 24 dBW.

**536**--In Region 3, the stations of those services to which the band 15 995-16 005 kHz is allocated may transmit standard frequency and time signals.

**538**--*Additional allocation*: in the U.S.S.R., the band 18 068-18 168 kHz is also allocated to the fixed service on a primary basis for use within the boundary of the U.S.S.R., with a peak envelope power not exceeding 1 kW.

**539**--*Alternative allocation*: in Bulgaria, Hungary, Mongolia, Poland, Czechoslovakia and the U.S.S.R., the band 21 850-21 870 kHz is allocated to the aeronautical fixed and the aeronautical mobile (R) services on a primary basis.

**540**--*Additional allocation*: in Nigeria, the band 22 720-23 200 kHz is also allocated to the meteorological aids service (radiosondes) on a primary basis.

**541**--The use of the band 23 350-24 000 kHz by the maritime mobile service is limited to intership radiotelegraphy.

**542--Additional allocation:** in Kenya, the band 23 600-24 900 kHz is also allocated to the meteorological aids service (radiosondes) on a primary basis.

**545--**The band 25 550-25 600 kHz is allocated to the fixed and mobile, except aeronautical mobile, service on a primary basis subject to the procedure described in Resolution 8. The use of this band by the radio astronomy service shall be subject to the completion of the satisfactory transfer of all assignments to stations in the fixed and mobile, except aeronautical mobile, services operating in this band and recorded in the Master Register, in accordance with the procedure described in Resolution 8. The band 25 600-25 670 kHz is allocated to the broadcasting service on a primary basis, subject to provisions to be established by the world administrative radio conference for the planning of HF bands allocated to the broadcasting service (see Resolution 508). After completion of all the above-mentioned provisions, all emissions capable of causing harmful interference to the radio astronomy service in the band 25 550-25 670 kHz shall be avoided. The use of passive sensors by other services will also be authorized.

**546--**The 26 957-27 283 kHz (center frequency 27 120 kHz) is designated for industrial, scientific and medical (ISM) applications. Radiocommunication services operating within this band must accept harmful interference which may be caused by these applications. ISM equipment operating in this band is subject to the provisions of No. 1815.

**547--**In making assignments to stations of other services to which the band 37.5-38.25 MHz is allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).

**548--**The band 40.66-40.70 MHz (center frequency 40.68 MHz) is designated for industrial,

scientific and medical (ISM) applications. Radiocommunication services operating within this band must accept harmful interference which may be caused by these applications. ISM equipment operating in this band is subject to the provisions of No. 1815.

**549--Additional allocation:** in Botswana, Burundi, Lesotho, Malawi, Namibia, Rwanda, South Africa, Swaziland, Zaire, Zambia and Zimbabwe the band 41-44 MHz is also allocated to the aeronautical radio-navigation service on a primary basis.

**550--Additional allocation:** in Iran and Japan, the band 41-44 MHz is also allocated to the radiolocation service on a secondary basis.

**552--Additional allocation:** in Australia and New Zealand, the band 44-47 MHz is also allocated to the broadcasting service on a primary basis.

**553--Additional allocation:** in Hungary, Kenya, Mongolia, Czechoslovakia and the U.S.S.R., the bands 47-48.5 MHz and 56.5-58 MHz are also allocated to the fixed and land mobile services on a secondary basis.

**554--Additional allocation:** in Albania, the Federal Republic of Germany, Austria, Belgium, Côte d'Ivoire, Denmark, Spain, Finland, France, Gabon, Greece, Ireland, Israel, Italy, Jordan, Lebanon, Libya, Liechtenstein, Luxembourg, Madagascar, Mali, Malta, Morocco, Mauritania, Monaco, Nigeria, Norway, the Netherlands, Poland, the German Democratic Republic, the United Kingdom, Senegal, Sweden, Switzerland, Swaziland, Syria, Togo, Tunisia, Turkey, and Yugoslavia, the band 47-68 MHz and in Romania, the band 47-58 MHz, are also allocated to the land mobile service on a permitted basis. However, stations of the land mobile service in the countries mentioned in connection with each band referred to in this footnote shall not cause harmful interference to, or claim protection from, existing or planned broadcasting stations of countries other than those mentioned in connection with the band. (**Mob-87**)

**555--Additional allocation:** in Angola, Cameroon, the Congo, Madagascar, Mozambique,

Somalia, Sudan, Tanzania and Chad, the band 47-68 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a permitted basis. **(WARC-92)**

**556--Alternative allocation:** in New Zealand, the band 50-51 MHz is allocated to the fixed, mobile and broadcasting services on a primary basis, the band 53-54 MHz is allocated to the fixed and mobile services on a primary basis.

**557--Alternative allocation:** in Afghanistan, Bangladesh, Brunei, India, Indonesia, Iran, Malaysia, Pakistan, Singapore and Thailand, the band 50-54 MHz is allocated to the fixed, mobile and broadcasting services on a primary basis.

**558--Additional allocation:** in Australia, China and the Democratic People's Republic of Korea, the band 50-54 MHz is also allocated to the broadcasting service on a primary basis.

**559--Alternative allocation:** in Botswana, Burundi, Lesotho, Malawi, Namibia, Rwanda, South Africa, Swaziland, Zaire, Zambia and Zimbabwe, the band 50-54 MHz is allocated to the amateur service on a primary basis.

**560--Additional allocation:** in New Zealand, the band 51-53 MHz is also allocated to the fixed and mobile services on a primary basis.

**561--Additional allocation:** in Botswana, Burundi, Lesotho, Malawi, Mali, Namibia, Rwanda, South Africa, Swaziland, Zaire, Zambia and Zimbabwe, the band 54-68 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

**562--Different category of service:** in the French Overseas Departments in Region 2, Guyana, Jamaica and Mexico, the allocation of the band 54-68 MHz to the fixed and mobile services is on a primary basis (see No. 425).

**563--Different category of service:** in Cuba, the French Overseas Departments in Region 2, Guyana, Jamaica and Mexico, the allocation of the band 68-72 MHz to the fixed and mobile services is on a primary basis (see No. 425).

**564--Alternative allocation:** in Bulgaria, Hungary, Poland, Romania and Czechoslovakia, the band 68-73 MHz is allocated to the broad-

casting service on a primary basis and used in accordance with the decisions in the Final Acts of the Special Regional Conference, Geneva, 1960.

**565--Alternative allocation:** in Mongolia and the U.S.S.R., the bands 68-73 MHz and 76-87.5 MHz are allocated to the broadcasting service on a primary basis. The services to which these bands are allocated in other countries and the broadcasting service in Mongolia and the U.S.S.R. are subject to agreements with the neighboring countries concerned.

**566--Addition allocation:** in Australia, China, the Republic of Korea, the Philippines, the Democratic People's Republic of Korea and Western Samoa, the band 68-74 MHz is also allocated to the broadcasting service on a primary basis.

**567--Additional allocation:** in Bulgaria, Hungary, Mongolia, Poland, Czechoslovakia and the U.S.S.R., the band 73-74 MHz is also allocated to the broadcasting service on a primary basis. The use of this band by the broadcasting service in Bulgaria, Hungary, Mongolia, Poland, Czechoslovakia and the U.S.S.R. is subject to agreement obtained under the procedure set forth in Article 14.

**568--In making assignments to stations of other services to which the band 73-74.6 MHz is allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).**

**570--Additional allocation:** in Colombia, Costa Rica, Cuba, El Salvador, Ecuador, Guatemala, Guyana, Honduras and Nicaragua, the band 73-74.6 MHz is also allocated to the fixed and mobile services on a secondary basis.

**571--Additional allocation:** in Bulgaria, China, Mongolia, Poland, Czechoslovakia and the U.S.S.R., the bands 74.6-74.8 MHz and 75.2-75.4 MHz are also allocated to the aeronautical radionavigation service, on a primary basis, for ground-based transmitters only. **(WARC-92)**

**572--**The frequency 75 MHz is assigned to marker beacons. Administrations shall refrain from assigning frequencies close to the limits of the guardband to stations of other services which, because of their power or geographical position, might cause harmful interference or otherwise place a constraint on marker beacons. Every effort should be made to improve further the characteristics of airborne receivers and to limit the power of transmitting stations close to the limits 74.8 MHz and 75.2 MHz. **(WARC-92)**

**572A--Additional allocation:** in Afghanistan, the Federal Republic of Germany, Austria, Belgium, Cyprus, Denmark, Egypt, Spain, France, Greece, Israel, Italy, Japan, Jordan, Lebanon, Malta, Morocco, Monaco, Norway, the Netherlands, Portugal, the United Kingdom, Sweden, Switzerland, Syria, and Turkey, the band 74.8-75.2 MHz is also allocated to the mobile service on a secondary basis subject to agreement obtained under the procedure set forth in Article 14. In order to ensure that harmful interference is not caused to stations of the aeronautical radionavigation service, stations of the mobile service shall not be introduced in the band until it is no longer required for the aeronautical radionavigation service by any administration which may be identified in the application of Article 14. **(Mob-87)**

**573--Additional allocation:** in Western Samoa, the band 75.4-87 MHz is also allocated to the broadcasting service on a primary basis.

**574--Additional allocation:** in China, the Republic of Korea, Japan, the Philippines and the Democratic People's Republic of Korea, the band 76-87 MHz is also allocated to the broadcasting service on a primary basis.

**575--Additional allocation:** in Bulgaria, Hungary, Poland, Romania and Czechoslovakia, the band 76-87.5 MHz is also allocated to the broadcasting service on a primary basis and used in accordance with the decisions contained in the Final Acts of the Special Regional Conference, Geneva, 1960.

**576--Different category of service:** in the United States, the French Overseas Departments in

Region 2, Guyana, Jamaica, Mexico and Paraguay, the allocation of the band 76-88 MHz to the fixed and mobile services is on a primary basis (see No. 425).

**577--**In Region 3 (except in the Republic of Korea, India, Japan, Malaysia, the Philippines, Singapore and Thailand), the band 79.75-80.25 MHz is also allocated to the radio astronomy service on a primary basis. In making assignments to stations of other services, administrations are urged to take all practicable steps in the band to protect the radio astronomy service from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).

**578--Alternative allocation:** in Albania, the band 81-87.5 MHz is allocated to the broadcasting service on a primary basis and used in accordance with the decisions contained in the Final Acts of the Special Regional Conference, Geneva, 1960.

**579--Additional allocation:** in Afghanistan and Australia, the band 85-87 MHz is also allocated to the broadcasting service on a primary basis. The introduction of the broadcasting service in these countries is subject to special agreements between the administrations concerned.

**580--Alternative allocation:** in New Zealand, the band 87-88 MHz is allocated to the land mobile service on a primary basis.

**581--Additional allocation:** in the Federal Republic of Germany, France, Ireland, Israel, Italy, Liechtenstein, Monaco, the United Kingdom and Switzerland, the band 87.5-88 MHz is also allocated to the land mobile service on a permitted basis and subject to agreement obtained under the procedure set forth in Article 14. **(WARC-92)**

**584--**Broadcasting stations in the band 100-108 MHz in Region 1 shall be established and operated in accordance with an agreement and associated plan for the band 87.5-108 MHz to be drawn up by a regional broadcasting conference (see Resolution 510). Prior to the date of

entry into force of this agreement, broadcasting stations may be introduced subject to agreement between administrations concerned, on the understanding that such an operation shall in no case prejudice the establishment of the plan.

**585--Additional allocation:** In China, the Republic of Korea, the Philippines and Singapore, the band 100-108 MHz is also allocated to the fixed and mobile services on a permitted basis.

**586--Alternative allocation:** in New Zealand, the band 100-108 MHz is allocated to the land mobile service on a primary basis and to the broadcasting service on a secondary basis.

**587--Additional allocation:** in Bulgaria, Israel, Kenya, Lebanon, Mongolia, Syria, the German Democratic Republic, the United Kingdom, Somalia, Czechoslovakia, Turkey, and the U.S.S.R., the band 104-108 MHz is also allocated to the mobile, except aeronautical mobile (R), service on a permitted basis, until 31 December 1995 and, thereafter, on a secondary basis. **(WARC-92)**

**588--Additional allocation:** in Finland and Yugoslavia, the band 104-108 MHz is also allocated to the fixed service on a permitted basis, until 31 December 1995. The effective radiated power of any station shall not exceed 25 W.

**589--Additional allocation:** in France, Romania, Sweden, and Yugoslavia, the band 104-108 MHz is also allocated to the mobile, except aeronautical mobile (R), service on a permitted basis until 31 December 1995. **(Mob-87)**

**590A--Additional allocation:** in Afghanistan, the Federal Republic of Germany, Austria, Cyprus, Denmark, Egypt, Spain, France, Israel, Italy, Japan, Jordan, Lebanon, Malta, Morocco, Monaco, Norway, Pakistan, Portugal, the United Kingdom, Sweden, Switzerland, Syria and Turkey, the band 108-111.975 MHz is also allocated to the mobile service on a secondary basis subject to agreement obtained under the procedure set forth in Article 14. In order to ensure that harmful interference is not caused to stations of the aeronautical radionavigation service, stations of the mobile service shall not

be introduced in the band until it is no longer required for the aeronautical radionavigation service by any administration which may be identified in the application of Article 14. **(Mob-87)**

**591--**Subject to agreement obtained under the procedure set forth in Article 14, the band 117.-975-137 MHz is also allocated to the aeronautical mobile-satellite (R) service on a secondary basis and on the condition that harmful interference is not caused to the aeronautical mobile (R) service.

**592--**The bands 121.45-121.55 MHz and 242.95-243.05 MHz are also allocated to the mobile-satellite service for the reception on board satellites of emissions from emergency position-indicating radiobeacons transmitting at 121.5 MHz and 243 MHz (see Nos. 3259 and 3267). **(Mob-83)**

**593--**In the band 117.975-136 MHz, the frequency 121.5 MHz is the aeronautical emergency frequency and, where required, the frequency 123.1 MHz is the aeronautical frequency auxiliary to 121.5 MHz. Mobile stations of the maritime mobile service may communicate on these frequencies under the conditions laid down in Articles 38 and N 38 for distress and safety purposes with stations of the aeronautical mobile service. **(Mob-87)**

**594--Additional allocation:** in Angola, Bulgaria, Hungary, Iran, Iraq, Japan, Mongolia, Mozambique, Papua New Guinea, Poland, the German Democratic Republic, Romania, Czechoslovakia and the U.S.S.R., the band 132-136 MHz is also allocated to the aeronautical mobile (OR) service on a permitted basis.

**594A--Different category of service:** as from 1 January 1990, in Bulgaria, Poland, the German Democratic Republic, Romania, Czechoslovakia, Turkey, and the USSR, the allocation of the band 136-137 MHz to the aeronautical mobile (OR) service is on a permitted basis. **(Mob-87)**

**595--**Until 1 January 1990, the band 136-137 MHz is also allocated to the space operation service (space-to-Earth), meteorological-satel-

lite service (space-to-Earth) and the space research service (space-to-Earth) on a primary basis. The introduction of stations of the aeronautical mobile (R) service shall only occur after that date. After 1 January 1990, the band 136-137 MHz will also be allocated to the above-mentioned space radiocommunication services on a secondary basis (see Resolution 408 (Mob-87)).

**596--*Different category of service:*** in Afghanistan, Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, China, Cuba, the United Arab Emirates, India, Indonesia, Iran, Iraq, Malaysia, Oman, Pakistan, Philippines, Qatar, Singapore, Sri Lanka, Thailand, Yemen and Yugoslavia, the band 137-138 MHz is allocated to the fixed and mobile, except aeronautical mobile (R), services on a primary basis (see No. 425). **(WARC-92)**

**597--*Different category of service:*** in Israel and Jordan, the allocation of the band 137-138 MHz to the fixed and mobile, except aeronautical mobile, services is on a primary basis (see No. 425). **(WARC-92)**

**598--*Different category of service:*** in Austria, Bulgaria, Egypt, Finland, France, Greece, Hungary, the Lebanon, Mongolia, Poland, the German Democratic Republic, Romania, Syria, Czechoslovakia and the U.S.S.R., the allocation of the band 137-138 MHz to the aeronautical mobile (OR) service is on a primary basis (see No. 425). **(WARC-92)**

**599--*Additional allocation:*** in Australia, the band 137-144 MHz is also allocated to the broadcasting service on a primary basis until that service can be accommodated within regional broadcasting allocations.

**599A--**The use of the band 137-138 MHz by the mobile-satellite service is subject to the application of the coordination and notification procedures set forth in Resolution 46. However, coordination of a space station of the mobile-satellite service with respect to terrestrial services is required only if the power flux-density produced by the station exceeds -125 dB(W/m<sup>2</sup>/4 kHz) at the Earth's surface. The above power flux-density limit shall apply until

such time as a competent world administrative radio conference revises it. In making assignments to the space stations in the mobile-satellite service in the above band, administrations shall take all practicable steps to protect the radio astronomy service in the 150.05-153 MHz band from harmful interference from unwanted emissions. **(WARC-92)**

**599B--**The use of the bands 137-138 MHz, 148-149.9 MHz and 400.15-401 MHz by the mobile-satellite service and the band 149.9-150.05 MHz by the land mobile-satellite service is limited to non-geostationary-satellite systems. **(WARC-92)**

**600--*Additional allocation:*** in the Federal Republic of Germany, Austria, Belgium, France, Israel, Italy, Liechtenstein, Luxembourg, the United Kingdom, Sweden, Switzerland and Czechoslovakia, the bands 138-143.6 MHz and 143.65-144 MHz are also allocated to the space research service (space-to-Earth) on a secondary basis.

**601--*Additional allocation:*** in the Federal Republic of Germany, Saudi Arabia, Austria, Bahrain, Belgium, Denmark, the United Arab Emirates, Spain, Finland, Greece, Ireland, Israel, Kenya, Kuwait, Liechtenstein, Luxembourg, Mali, Malta, Norway, the Netherlands, Qatar, the United Kingdom, Somalia, Sweden, Switzerland, Tanzania, Tunisia, Turkey and Yugoslavia, the band 138-144 MHz is also allocated to the maritime mobile and land mobile services on a primary basis.

**602--*Alternative allocation:*** in Angola, Botswana, Burundi, Cameroon, the Central African Republic, the Congo, Gabon, Gambia, Ghana, Guinea, Iraq, Jordan, Lesotho, Liberia, Libya, Malawi, Mozambique, Namibia, Nigeria, Oman, Rwanda, Sierra Leone, South Africa, Swaziland, Chad, Togo, Zaire, Zambia and Zimbabwe, the band 138-144 MHz is allocated to the fixed and mobile services on a primary basis.

**603--*Additional allocation:*** in China, the band 138-144 MHz is also allocated to the radiolocation service on a primary basis.



**604--Additional allocation:** in Ethiopia, Finland, Kenya, Malta, Somalia, Sudan, Tanzania, and Yugoslavia, the band 138-144 MHz is also allocated to the fixed service on a primary basis. **(WARC-92)**

**605--Additional allocation:** in Singapore, the band 144-145 MHz is also allocated to the fixed and mobile services on a primary basis. Such use is limited to systems in operation on or before 1 January 1980, which in any case shall cease by 31 December 1995.

**606--Additional allocation:** In China, the band 144-146 MHz is also allocated to the aeronautical mobile (OR) service on a secondary basis.

**607--Alternative allocation:** in Afghanistan, Bangladesh, Cuba, Guyana and India, the band 146-148 MHz is allocated to the fixed and mobile services on a primary basis.

**608--Subject to agreement obtained under the procedure set forth in Article 14, the band 148-149.9 MHz may be used by the space operation service (Earth-to-space). The bandwidth of an individual transmission shall not exceed  $\pm 25$  kHz.**

**608A--The use of the band 148-149.9 MHz by the mobile-satellite service is subject to the application of the coordination and notification procedures set forth in Resolution 46 (WARC-92). The mobile-satellite service shall not constrain the development and use of fixed, mobile and space operation services in the band 148-149.9 MHz. Mobile earth stations in the mobile-satellite service shall not produce a power flux-density in excess of  $-150 \text{ dB(W/m}^2/4 \text{ kHz)}$  outside national boundaries. **(WARC-92)****

**608B--The use of the band 149.9-150.05 MHz by the land mobile-satellite service is subject to the application of the coordination and notification procedures set forth in Resolution 46 (WARC-92). The land mobile-satellite service shall not constrain the development and use of the radionavigation-satellite service in the band 149.9-150.05 MHz. Land mobile earth stations of the land mobile-satellite service shall not produce power flux-density in excess of  $-150 \text{ dB(W/m}^2/4 \text{ kHz)}$  outside national bound-**

**daries. (WARC-92)**

**608C--Stations of the mobile-satellite service in the band 148-149.9 MHz shall not cause harmful interference to, or claim protection from stations of the fixed or mobile services in the following countries:** Algeria, the Federal Republic of Germany, Saudi Arabia, Australia, Austria, Bangladesh, Belarus, Belgium, Brunei Darussalam, Bulgaria, Cameroon, Canada, Cyprus, Colombia, Congo, Cuba, Denmark, Egypt, the United Arab Emirates, Ecuador, Spain, Ethiopia, the Russian Federation, Finland, France, Ghana, Greece, Honduras, Hungary, Iran, Ireland, Iceland, Israel, Italy, Japan, Jordan, Kenya, Libya, Liechtenstein, Luxembourg, Malaysia, Mali, Malta, Mauritania, Mozambique, Namibia, Norway, New Zealand, Oman, Pakistan, Panama, Papua New Guinea, the Netherlands, Philippines, Poland, Portugal, Qatar, Syria, Romania, the United Kingdom, Singapore, Sri Lanka, Sweden, Switzerland, Suriname, Swaziland, Tanzania, Chad, the Czech and Slovak Federal Republic, Thailand, Tunisia, Turkey, Ukraine, Yemen and Yugoslavia that operate in accordance with the Table of Frequency Allocations. **(WARC-92)**

**609--Emissions of the radionavigation-satellite service in the bands 149.9-150.05 MHz and 399.9-400.05 MHz may also be used by receiving earth stations of the space research service.**

**609A--Recognizing that the use of the band 149.9-150.05 MHz by the fixed and mobile services may cause harmful interference to the radionavigation-satellite service, administrations are urged not to authorize such use in application No. 342. **(Mob-87)****

**609B--In the band 149.9-150.05 MHz, the allocation to the land mobile-satellite service shall be on a secondary basis until 1 January 1997. **(WARC-92)****

**610--In making assignments to stations of other services to which the band 150.05-153 MHz is allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from space or air-borne stations can be particu-**

larly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).

**611--Additional allocation:** in Australia and India, the band 150.05-153 MHz is also allocated to the radio astronomy service on a primary basis.

**613--**The frequency 156.8 MHz is the international distress, safety and calling frequency for the maritime mobile VHF radiotelephone service. The conditions for the use of this frequency are contained in Article 38 and N 38.

In the bands 156-156.7625 MHz, 156.8375-157.45 MHz, 160.6-160.975 MHz and 161.475-162.05 MHz, each administration shall give priority to the maritime mobile service on only such frequencies as are assigned to stations of the maritime mobile service by that administration (see Articles 38, N38 and 60).

Any use of frequencies in these bands by stations of other services to which they are allocated should be avoided in areas where such use might cause harmful interference to the maritime mobile VHF radiocommunication service.

However, the frequency 156.8 MHz and the frequency bands in which priority is given to the maritime mobile service may be used for radiocommunications on inland waterways subject to agreement between interested and affected administrations and taking into account current frequency usage and existing agreements. **(Mob-87)**

**613A--**In the maritime mobile VHF service the frequency 156.525 MHz is to be used exclusively for digital selective calling for distress, safety and calling (see Resolution 323 (Mob-87)). The conditions for the use of these frequency are prescribed in Articles 38, N38 and 60 and in Appendix 18. **(Mob-87)**

**613B--Additional allocation:** in Ireland and in the United Kingdom, the band 161.3875-161.4125 MHz is also allocated to the maritime radionavigation service on a primary basis, subject to agreement obtained under the procedure set forth in Article 14. **(Mob-87)**

**615--Alternative allocation:** in Morocco, the band 162-174 MHz is allocated to the broadcasting service on a primary basis. The use of this band shall be subject to agreement with administrations having services, operating or planned, in accordance with the Table which are likely to be affected. Stations in existence on 1 January 1981, with their technical characteristics as of that date, are not affected by such agreement.

**616--Additional allocation:** in China, the band 163-167 MHz is also allocated to the space operation service (space-to-Earth) on a primary basis subject to agreement obtained under the procedure set forth in Article 14.

**617--Additional allocation:** in Afghanistan, China and Pakistan, the band 167-174 MHz is also allocated to the broadcasting service on a primary basis. The introduction of the broadcasting service into this band shall be subject to agreement with the neighboring countries in Region 3 whose services are likely to be affected.

**618--Additional allocation:** in Japan, the band 170-174 MHz is also allocated to the broadcasting service on a primary basis.

**619--Additional allocation:** in China, the band 174-184 MHz is also allocated to the space research (space-to-Earth) and the space operation (space-to-Earth) services on a primary basis subject to agreement obtained under the procedure set forth in Article 14. These services shall not cause harmful interference to, or claim protection from, existing or planned broadcasting stations.

**620--Different category of service:** in Mexico, the allocation of the band 174-216 MHz to the fixed and mobile services is on a primary basis (see No. 425).

**621--Additional allocation:** in the Federal Republic of Germany, Austria, Belgium, Denmark, Spain, Finland, France, Israel, Italy, Liechtenstein, Malta, Monaco, Norway, the Netherlands, the United Kingdom, Sweden and Switzerland, the band 174-223 MHz is also allocated to the land mobile service on a permitted basis.

However, the stations of the land mobile service shall not cause harmful interference to, or claim protection from, broadcasting stations, existing or planned, in countries other than those listed in this footnote. **(WARC-92)**

**622--Different category of service:** in the Federal Republic of Germany, Austria, Belgium, Denmark, Spain, Finland, France, Israel, Italy, Liechtenstein, Luxembourg, Malta, Monaco, Norway, the Netherlands, Portugal, the United Kingdom, Sweden and Switzerland, the band 223-230 MHz is allocated to the land mobile service on a permitted basis (see No. 425). However, the stations of the land mobile service shall not cause harmful interference to, or claim protection from, broadcasting stations, existing or planned, in countries other than those listed in this footnote. **(WARC-92)**

**623--Additional allocation:** in the Congo, Ethiopia, Gambia, Guinea, Kenya, Libya, Malawi, Mali, Uganda, Senegal, Sierra Leone, Somalia, Tanzania and Zimbabwe, the band 174-223 MHz is also allocated to the fixed and mobile services on a secondary basis.

**624--Additional allocation:** in Bangladesh, India, Pakistan and the Philippines, the band 200-216 MHz is also allocated to the aeronautical radionavigation service on a primary basis.

**625--Additional allocation:** in Australia and Papua New Guinea, the bands 204-208 MHz and 222-223 MHz are also allocated to the aeronautical radionavigation service on a primary basis.

**626--Additional allocation:** in China, India and Thailand, the band 216-223 MHz is also allocated to the aeronautical radionavigation service on a primary basis and to the radiolocation service on a secondary basis.

**627--In Region 2,** no new stations in the radiolocation service may be authorized in the band 216-225 MHz. Stations authorized prior to 1 January 1990 may continue to operate on a secondary basis.

**(WARC-92)**

**627A--Additional allocation:** in Canada, the band 216-220 MHz is also allocated to the land

mobile service on a primary basis. **(Mob-87)**

**628--Additional allocation:** in Somalia, the band 216-225 MHz is also allocated to the aeronautical radionavigation service on a primary basis, subject to not causing harmful interference to existing or planned broadcasting services in other countries.

**629--Additional allocation:** in Oman, the United Kingdom and Turkey, the band 216-235 MHz is also allocated to the radiolocation service on a secondary basis.

**630--Additional allocation:** in Japan, the band 222-223 MHz is also allocated to the aeronautical radionavigation service on a primary basis and to the radiolocation service on a secondary basis.

**631--Different category of service:** in Spain and Portugal, the band 223-230 MHz is allocated to the fixed service on a permitted basis (see No. 425). Stations of this service shall not cause harmful interference to, or claim protection from, broadcasting stations of other countries, whether existing or planned, that operate in accordance with the Table.

**632--Additional allocation:** in Saudi Arabia, Bahrain, the United Arab Emirates, Israel, Jordan, Oman, Qatar and Syria, the band 223-235 MHz is also allocated to the aeronautical radionavigation service on a permitted basis.

**635--Alternative allocation:** in Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe, the bands 223-238 MHz and 246-254 MHz are allocated to the broadcasting service on a primary basis subject to agreement obtained under the procedure set forth in Article 14. **(WARC-92)**

**636--Alternative allocation:** in New Zealand, Western Samoa and the Niue and Cook Islands, the band 225-230 MHz is allocated to the fixed, mobile and aeronautical radionavigation services on a primary basis.

**637--Additional allocation:** in China, the band 225-235 MHz is also allocated to the radio astronomy service on a secondary basis.

**638--Additional allocation:** in Nigeria, the band

230-235 MHz is also allocated to the aeronautical radionavigation service on a primary basis, subject to agreement obtained under the procedure set forth in Article 14.

**639**--*Additional allocation*: in Yugoslavia, the band 230-235 MHz is also allocated to the aeronautical radionavigation service on a primary basis, until 1 January 1995. The use of this band by the aeronautical radionavigation service in Yugoslavia is restricted to the stations in operation by 1 January 1980.

**640**--*Additional allocation*: in New Zealand, the band 235-239.5 MHz is also allocated to the aeronautical radionavigation service on a primary basis.

**641**--Subject to agreement obtained under the procedure set forth in Article 14, the bands 235-322 MHz and 335.4-399.9 MHz may be used by the mobile-satellite service, on condition that stations in this service do not cause harmful interference to those of other services operating or planned to be operated in accordance with the Table.

**641A**--The bands 312-315 MHz (Earth-to-space) and 387-390 MHz (space-to-Earth) in the mobile-satellite service may also be used by non-geostationary-satellite systems. Such use is subject to the application of the coordination and notification procedures set forth in Resolution 46. (**WARC-92**)

**642**--The frequency 243 MHz is the frequency in this band for use by survival craft stations and equipment used for survival purposes (see Article 38). (**Mob-87**)

**643**--Subject to agreement obtained under the procedure set forth in Article 14, the band 267-272 MHz may be used by administrations for space telemetry in their countries on a primary basis.

**644**--In making assignments to stations of other services to which the band 322-328.6 MHz is allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio

astronomy service (see Nos. 343 and 344 and Article 36).

**645**--Limited to Instrument Landing Systems (glide path).

**645A**--*Additional allocation*: in Afghanistan, the Federal Republic of Germany, Austria, Belgium, Cyprus, Denmark, Egypt, Spain, France, Greece, Israel, Italy, Japan, Jordan, Malta, Morocco, Monaco, Norway, the Netherlands, Portugal, the United Kingdom, Sweden, Switzerland, Syria and Turkey, the band 328.6-335.4 MHz is also allocated to the mobile service on a secondary basis subject to agreement obtained under the procedure set forth in Article 14. In order to ensure that harmful interference is not caused to stations of the aeronautical radionavigation service, stations of the mobile service shall not be introduced in the band until it is no longer required for the aeronautical radionavigation service by any administration which may be identified in the application of Article 14. (**Mob-87**)

**645B**--Recognizing that the use of the band 399.9-400.05 MHz by the fixed and mobile services may cause harmful interference to the radionavigation-satellite service, administrations are urged not to authorize such use in application of No. 342. (**Mob-87**)

**646**--Emissions shall be confined in a band of  $\pm 25$  kHz about the standard frequency 400.1 MHz.

**647**--*Additional allocation*: in Afghanistan, Saudi Arabia, Bahrain, Bulgaria, Colombia, Costa Rica, Cuba, Egypt, the United Arab Emirates, Ecuador, Hungary, Indonesia, Iran, Iraq, Israel, Jordan, Kuwait, Liberia, Malaysia, Nigeria, Oman, Pakistan, the Philippines, Poland, Qatar, Syria, the German Democratic Republic, Romania, Singapore, Somalia, Sri Lanka, Czechoslovakia, Thailand, the U.S.S.R. and Yugoslavia, the band 400.05-401 MHz is also allocated to the fixed and mobile services on a primary basis. (**WARC-92**)

**647A**--The band 400.15-401 MHz is also allocated to the space research service in the space-to-space direction for communications

with manned space vehicles. In this application, the space research service will not be regarded as a safety service. **(WARC-92)**

**647B**--The use of the band 400.15-401 MHz by the mobile-satellite service is subject to the application of the coordination and notification procedures set forth in Resolution 46. However, coordination of a space station of the mobile-satellite service with respect to terrestrial services is required only if the power flux-density produced by the station exceeds -125 dB(W/m<sup>2</sup>/4 kHz) at the Earth's surface. The above power flux-density limit shall apply until such time as a competent world administrative radio conference revises it. In making assignments to the space stations in the mobile-satellite service in the above band, administrations shall take all practicable steps to protect the radio astronomy service in the band 406.1-410 MHz from harmful interference from unwanted emissions. **(WARC-92)**

**648**--*Additional allocation*: in Canada, the bands 405.5-406 MHz and 406.1-410 MHz are also allocated to the mobile-satellite, except aeronautical mobile-satellite, service (Earth-to-space), on a primary basis, subject to agreement obtained under the procedure set forth in Article 14.

**649**--The use of the band 406-406.1 MHz by the mobile-satellite service is limited to low power satellite emergency position-indicating radio-beacons (see also Articles 38 and N 38). **(Mob-87)**

**649A**--Any emission capable of causing harmful interference to the authorized uses of the band 406-406.1 MHz is prohibited. **(Mob-87)**

**650**--In making assignments to stations of other services to which the band 406.1-410 MHz is allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).

**651**--*Different category of service*: in Australia, the United States, India, Japan and the United Kingdom, the allocation of the bands 420-430 MHz and 440-450 MHz to the radiolocation service is on a primary basis (see No. 425).

**651A**--Use of the band 410-420 MHz by the space research service is limited to communications within 5 km of an orbiting, manned space vehicle. **(WARC-92)**

**652**--*Additional allocation*: in Australia, the United States, Jamaica and the Philippines, the bands 420-430 MHz and 440-450 MHz are also allocated to the amateur service on a secondary basis.

**653**--*Additional allocation*: in China, India, the German Democratic Republic, the United Kingdom and the U.S.S.R., the band 420-460 MHz is also allocated to the aeronautical radionavigation service (radio altimeters) on a secondary basis.

**654**--*Different category of service*: in France, the allocation of the band 430-434 MHz to the amateur service is on a secondary basis (see No. 424).

**655**--*Different category of service*: in Denmark, Libya, Norway and Sweden, the allocation of the bands 430-432 MHz and 438-440 MHz to the radiolocation service is on a secondary basis (see No 424).

**656**--*Alternative allocation*: in Denmark, Norway and Sweden, the bands 430-432 MHz and 438-440 MHz are allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

**657**--*Additional allocation*: in Finland, Libya and Yugoslavia, the bands 430-432 MHz and 438-440 MHz are also allocated to the fixed and mobile except aeronautical mobile, services on a primary basis.

**658**--*Additional allocation*: in Afghanistan, Algeria, Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Burkina Faso, Burundi, Egypt, the United Arab Emirates, Ecuador, Ethiopia, Greece, Guinea, India, Indonesia, Iran, Iraq, Israel, Italy, Jordan, Kenya, Kuwait, the Lebanon, Libya, Liechtenstein, Malaysia, Malta,

Nigeria, Oman, Pakistan, the Philippines, Qatar, Syria, Singapore, Somalia, Switzerland, Tanzania, Thailand, Togo, Turkey and Yemen, the band 430-440 MHz is also allocated to the fixed service on a primary basis and the bands 430-435 MHz and 438-440 MHz are also allocated to the mobile, except aeronautical mobile, service on a primary basis. **(WARC-92)**

**659--Additional allocation:** in Angola, Bulgaria, Cameroon, the Congo, Djibouti, Gabon, Hungary, Malawi, Mali, Mongolia, Niger, Pakistan, Poland, the German Democratic Republic, Democratic People's Republic of Korea, Romania, Rwanda, Chad, Czechoslovakia and the U.S.S.R., the band 430-440 MHz is also allocated to the fixed service on a primary basis. **(WARC-92)**

**660--Different category of service:** in Argentina, Colombia, Costa Rica, Cuba, Guyana, Honduras, Panama and Venezuela, the allocation of the band 430-440 MHz to the amateur service is on a primary basis (see No. 425).

**660A--Additional allocation:** in Mexico, the bands 430-435 MHz and 438-440 MHz are also allocated on a primary basis to the land mobile service, subject to agreement obtained under the procedure set forth in Article 14. **(Mob-87)**

**661--**In Region 1, except in the countries mentioned in No. 662, the band 433.05-434.79 MHz (center frequency 433.92 MHz) is designated for industrial, scientific and medical (ISM) applications. The use of this frequency band for ISM applications shall be subject to special authorization by the administration concerned, in agreement with other administrations whose radiocommunication services might be affected. In applying this provision, administrations shall have due regard to the latest relevant CCIR Recommendations.

**662--**In the Federal Republic of Germany, Austria, Liechtenstein, Portugal, Switzerland and Yugoslavia, the band 433.05-434.79 MHz (center frequency 433.92 MHz) is designated for industrial, scientific and medical (ISM) applications. Radiocommunication services of these countries operating within this band must

accept harmful interference which may be caused by these applications. ISM equipment operating in this band is subject to the provisions of No. 1815.

**663--Additional allocation:** in the French Overseas Departments in Region 2, and India, the band 433.75-434.25 MHz is also allocated to the space operation service (Earth-to-space) on a primary basis. In France and in Brazil, the band is allocated to the same service on a secondary basis. **(WARC-92)**

**664--**In the bands 435-438 MHz, 1260-1270 MHz, 2400-2450 MHz, 3400-3410 MHz (in Regions 2 and 3 only) and 5650-5670 MHz, the amateur-satellite service may operate subject to not causing harmful interference to other services operating in accordance with the Table (see No. 435). Administrations authorizing such use shall ensure that any harmful interference caused by emissions from a station in the amateur-satellite service is immediately eliminated in accordance with the provisions of No. 2741. The use of the bands 1260-1270 MHz and 5650-5670 MHz by the amateur-satellite service is limited to the Earth-to-space direction.

**665--Additional allocation:** in Austria, the band 438-440 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

**666--Additional allocation:** in Canada, New Zealand and Papua New Guinea, the band 440-450 MHz is also allocated to the amateur service on a secondary basis.

**667--Different category of service:** in Canada, the allocation of the band 440-450 MHz to the radiolocation service is on a primary basis (see No. 425).

**668--**Subject to agreement obtained under the procedure set forth in Article 14, the band 449.75-450.25 MHz may be used for the space operation service (Earth-to-space) and the space research service (Earth-to-space).

**669--**In the maritime mobile service, the frequencies 457.525 MHz, 457.550 MHz, 457.575 MHz, 467.525 MHz, 467.550 MHz and 467.575 MHz may be used by onboard communication

stations. The use of these frequencies in territorial waters may be subject to the national regulations of the administration concerned. The characteristics of the equipment used shall conform to those specified in Appendix 20.

**670**--In the territorial waters of Canada, the United States and the Philippines, the preferred frequencies for use by on-board communication stations shall be 457.525 MHz, 457.550 MHz, 457.575 MHz and 457.600 MHz paired, respectively, with 467.750 MHz, 467.775 MHz, 467.-800 MHz and 467.825 MHz. The characteristics of the equipment used shall conform to those specified in Appendix 20.

**671**--Earth exploration-satellite service applications, other than the meteorological-satellite service, may also be used in the bands 460-470 MHz and 1 690-1 710 MHz for space-to-Earth transmissions subject to not causing harmful interference to stations operating in accordance with the Table.

**672**--*Different categories of service*: in Afghanistan, Bulgaria, China, Cuba, Japan, Mongolia, Poland, Czechoslovakia and the U.S.S.R., the allocation of the band 460-470 MHz to the meteorological-satellite service (space-to-Earth) is on a primary basis (see No. 425) and is subject to agreement obtained under the procedure set forth in Article 14. **(WARC-92)**

**673**--*Additional allocation*: in China, the band 470-485 MHz is also allocated to the space research (space-to-Earth) and the space operation (space-to-Earth) services on a primary basis subject to agreement obtained under the procedure set forth in Article 14, subject to not causing harmful interference to existing and planned broadcasting stations.

**674**--*Different category of service*: in Mexico and Venezuela, the allocation of the band 470-512 MHz to the fixed and mobile services, and in Argentina and Uruguay to the mobile service, is on a primary basis (see No. 425), subject to agreement obtained under the procedure set forth in Article 14. **(Mob-87)**

**675**--*Different category of service*: in Chile, Colombia, Cuba, Ecuador, the United States,

Guyana, Honduras, Jamaica, Mexico and Panama, the allocation of the bands 470-512 MHz and 614-806 MHz to the fixed and mobile services is on a primary basis (see No. 425), subject to agreement obtained under the procedure set forth in Article 14. **(WARC-92)**

**676**--*Additional allocation*: in Burundi, Cameroon, the Congo, Ethiopia, Israel, Kenya, Lebanon, Libya, Malawi, Senegal, Sudan, Syria, and Yemen, the band 470-582 MHz is also allocated to the fixed service on a secondary basis. **(WARC-92)**

**677**--*Alternative allocation*: in Pakistan, the bands 470-582 MHz and 610-890 MHz are allocated to the broadcasting service on a primary basis.

**677A**--*Additional allocation*: in the Federal Republic of Germany, Austria, Belgium, Cyprus, Denmark, Spain, Finland, France, Ireland, Israel, Italy, Libya, Malta, Morocco, Monaco, Norway, the Netherlands, Portugal, the United Kingdom, Sweden, Switzerland, Swaziland, Syria, Tunisia and Turkey, the band 470-790 MHz is also allocated on a secondary basis to the land mobile service, intended for applications ancillary to broadcasting. Stations of the land mobile service in the countries mentioned in this footnote, shall not cause harmful interference to existing or planned stations operating in accordance with the Table of Frequency Allocations in countries other than those listed in this footnote. **(Mob-87)**

**678**--*Additional allocation*: in Costa Rica, Cuba, El Salvador, Ecuador, the United States, Guatemala, Guyana, Honduras, Jamaica, Mexico and Venezuela, the band 512-608 MHz is also allocated to the fixed and mobile services on a primary basis, subject to agreement obtained under the procedure set forth in Article 14. **(WARC-92)**

**679**--*Additional allocation*: in India, the band 549.75-550.25 MHz is also allocated to the space operation service (space-to-Earth) on a secondary basis.

**683**--*Additional allocation*: in Oman, the band 582-606 MHz is also allocated to the radionav-

igation service on a secondary basis.

**684--Additional allocation:** in Israel, Libya, Syria and Sudan, the band 582-790 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a secondary basis.

**685--Additional allocation:** in Denmark and Kuwait, the band 590-598 MHz is also allocated to the aeronautical radionavigation service on a primary basis until 1 January 1995.

**686--Additional allocation:** in the United Kingdom, the band 590-598 MHz is also allocated to the aeronautical radionavigation service on a primary basis. All new assignments to stations in the aeronautical radionavigation service, including those transferred from the adjacent bands, shall be subject to coordination with the Administrations of the following countries: the Federal Republic of Germany, Belgium, Denmark, Spain, France, Ireland, Luxembourg, Morocco, Norway and the Netherlands.

**686A--Additional allocation:** in the United Kingdom, the band 598-606 MHz is also allocated to the aeronautical radionavigation service on a primary basis until 31 December 1994. All new assignments to stations in the aeronautical radionavigation service in this band are subject to the agreement of the Administrations of the following countries: the Federal Republic of Germany, Belgium, Denmark, Spain, France, Ireland, Luxembourg, Morocco, Norway and the Netherlands. **(Mob-87)**

**687--Additional allocation:** in the African Broadcasting Area (see Nos. 400 to 403), the band 606-614 MHz is also allocated to the radio astronomy service on a permitted basis.

**688--Additional allocation:** in China, the band 606-614 MHz is also allocated to the radio astronomy service on a primary basis.

**689--In Region 1, except in the African Broadcasting Area (see Nos. 400 to 403), and in Region 3, the band 608-614 MHz is also allocated to the radio astronomy service on a secondary basis. In making assignments to stations of other services to which the band is allocated, adminis-**

trations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).

**690--Additional allocation:** in India, the band 608-614 MHz is also allocated to the radio astronomy service on a primary basis.

**691--Additional allocation:** in New Zealand, the band 610-620 MHz is also allocated to the amateur service on a secondary basis.

**692--Different category of service:** in Costa Rica, El Salvador and Honduras, the allocation of the band 614-806 MHz to the fixed service is on a primary basis (see No. 425), subject to agreement obtained under the procedure set forth in Article 14.

**692A--Additional allocation:** in Cuba, the band 614-890 MHz is also allocated to the radionavigation service on a primary basis, subject to agreement obtained under the procedure set forth in Article 14. **(Mob-87)**

**693--Within the frequency band 620-790 MHz, assignments may be made to television stations using frequency modulation in the broadcasting-satellite service subject to agreement between the administrations concerned and those having services, operating in accordance with the Table, which may be affected (see Resolutions 33 and 507). Such stations shall not produce a power flux-density in excess of the value  $-129$  dB (W/m<sup>2</sup>) for angles of arrival less than 20° (see Recommendation 705) within the territories of other countries without the consent of the administrations of those countries.**

**694--Additional allocation:** in Bulgaria, Hungary, Mongolia, Poland, the German Democratic Republic, Romania, Czechoslovakia and the U.S.S.R., the band 645-862 MHz is also allocated to the aeronautical radionavigation service on a permitted basis.

**695--Alternative allocation:** in Spain and France, the band 790-830 MHz is allocated to the broadcasting service on a primary basis.

**695A--Additional allocation:** in Austria, Italy,



the United Kingdom and Swaziland, the band 790-862 MHz is also allocated to the land mobile service on a secondary basis. **(Mob-87) 696--Alternative allocation:** in Greece, Italy, Morocco and Tunisia, the band 790-838 MHz is allocated to the broadcasting service on a primary basis.

**697--Additional allocation:** in the Federal Republic of Germany, Burkina Faso, Cameroon, Cote d'Ivoire, Denmark, Egypt, Finland, Israel, Kenya, Libya, Liechtenstein, Monaco, Norway, the Netherlands, Portugal, Sweden, Switzerland and Yugoslavia, the band 790-830 MHz, and in these same countries and in Spain, France, Malta, the Gabonese Republic and Syria, the band 830-862 MHz, are also allocated to the mobile, except aeronautical mobile, service on a primary basis. However, stations of the mobile service in the countries mentioned in connection with each band referred to in this footnote shall not cause harmful interference to, or claim protection from, stations of services operating in accordance with the Table in countries other than those mentioned in connection with the band. **(WARC-92)**

**700--Additional allocation:** in Region 2, the band 806-890 MHz is also allocated to the mobile-satellite service on a primary basis. The use of this service is intended for operation within national boundaries and subject to agreement obtained under the procedure set forth in Article 14. **(Mob-87)**

**700A--Additional allocation:** in Canada, the United States and Mexico, the bands 849-851 MHz and 894-896 MHz are also allocated to the aeronautical mobile service on a primary basis, for public correspondence with aircraft. The use of the band 849-851 MHz is limited to transmissions from aeronautical stations and the use of the band 894-896 MHz is limited to transmissions from aircraft stations. **(WARC-92)**

**700B--Additional allocation:** in Belarus, the Russian Federation and Ukraine, the bands 806-840 MHz (Earth-to-space) and 856-890 MHz (space-to-Earth) are also allocated to the mobile-satellite, except aeronautical mobile-

satellite (R) service. The use of these bands by this service shall not cause harmful interference to, or claim protection from, services in other countries operating in accordance with the Table of Frequency Allocations and is subject to special agreements between the administrations concerned. **(WARC-92)**

**701--Additional allocation:** in Region 3, the bands 806-890 MHz and 942-960 MHz are also allocated to the mobile-satellite, except aeronautical mobile-satellite (R), service on a primary basis. The use of this service is limited to operation within national boundaries and subject to agreement obtained under the procedure set forth in Article 14. In seeking such agreement, appropriate protection shall be afforded to services operating in accordance with the Table, to ensure that no harmful interference is caused to such services. **(Mob-87)**

**702--Alternative allocation:** in Italy, the band 838-854 MHz is allocated to the broadcasting service on a primary basis as from 1 January 1995.

**703--In Region 1, in the band 862-960 MHz, stations of the broadcasting service shall be operated only in the African Broadcasting Area (see Nos. 400 to 403) excluding Algeria, Egypt, Spain, Libya and Morocco, subject to agreement obtained under the procedure set forth in Article 14. (WARC-92)**

**704--Additional allocation:** in Bulgaria, Hungary, Mongolia, Poland, the German Democratic Republic, Romania, Czechoslovakia and the U.S.S.R., the band 862-960 MHz is also allocated to the aeronautical radionavigation service on a permitted basis until 1 January 1998. Up to this date, the aeronautical radionavigation service may use the band, subject to agreement obtained under the procedure set forth in Article 14. After this date, the aeronautical radionavigation service may continue to operate on a secondary basis.

**704A--Additional allocation:** in Brazil, Canada and the United States of America, the band 890-896 MHz is also allocated to the mobile-satellite

service on a primary basis. The use of this service is intended for operations within national boundaries and subject to agreement obtained under the procedure set forth in Article 14. In seeking such agreement, appropriate protection shall be afforded to services operating in accordance with the Table.

**705--Different category of service:** in the United States, the allocation of the band 890-942 MHz to the radiolocation service is on a primary basis (see No. 425) and subject to agreement obtained under the procedure set forth in Article 14. **(Mob-87)**

**706--Different category of service:** in Australia, the allocation of the band 890-942 MHz to the radiolocation service is on a primary basis (see No. 425).

**707--**In Region 2, the band 902-928 MHz (center frequency 915 MHz) is designated for industrial, scientific and medical (ISM) applications. Radiocommunication services operating within this band must accept harmful interference which may be caused by these applications. ISM equipment operating in this band is subject to the provisions of No. 1815.

**707A--Different category of service:** in Chile, the band 903-905 MHz is allocated to the mobile, except aeronautical mobile, service on a primary basis and is subject to agreement obtained under the procedure set forth in Article 14. **(Mob-87)**

**709--**The band 960-1 215 MHz is reserved on a worldwide basis for the use and development of airborne electronic aids to air navigation and any directly associated groundbased facilities.

**710--**Use of the radionavigation-satellite service in the band 1 215-1 260 MHz shall be subject to the condition that no harmful interference is caused to the radionavigation service authorized under No. 712.

**711--Additional allocation:** in Afghanistan, Angola, Saudi Arabia, Bahrain, Bangladesh, Cameroon, China, the United Arab Emirates, Ethiopia, Guinea, Guyana, India, Indonesia, Iran, Iraq, Israel, Japan, Jordan, Kuwait, the Lebanon, Libya, Malawi, Morocco, Mozam-

bique, Nepal, Nigeria, Oman, Pakistan, the Philippines, Qatar, Syria, Somalia, Sudan, Sri Lanka, Chad, Thailand, Togo and Yemen (P.D.R. of), the band 1215-1300 MHz is also allocated to the fixed and mobile services on a primary basis.

**712--Additional allocation:** in Algeria, the Federal Republic of Germany, Austria, Bahrain, Belgium, Benin, Burundi, Cameroon, China, Denmark, the United Arab Emirates, France, Greece, India, Iran, Iraq, Kenya, Liechtenstein, Luxembourg, Mali, Mauritania, Norway, Oman, Pakistan, the Netherlands, Portugal, Qatar, Senegal, Somalia, Sudan, Sri Lanka, Sweden, Switzerland, Tanzania, Turkey and Yugoslavia, the band 1 215-1 300 MHz is also allocated to the radionavigation service on a primary basis.

**712A--Additional allocation:** in Cuba, the band 1215-1300 MHz is also allocated to the radionavigation service on a primary basis subject to the agreement obtained under the procedure set forth in Article 14. **(Mob-87)**

**713--**In the bands 1215-1300 MHz, 3100-3300 MHz, 5250-5350 MHz, 8550-8650 MHz, 9500-9800 MHz and 13.4-14.0 GHz, radiolocation stations installed on spacecraft may also be employed for the earth exploration-satellite and space research services on a secondary basis.

**714--Additional allocation:** in Canada and the United States, the bands 1240-1300 MHz and 1350-1370 MHz are also allocated to the aeronautical radionavigation service on a primary basis.

**715--Additional allocation:** in Indonesia, the band 1300-1350 MHz is also allocated to the fixed and mobile services on a primary basis.

**716--Alternative allocation:** in Ireland and the United Kingdom, the band 1 300-1 350 MHz is allocated to the radiolocation service on a primary basis.

**717--**The use of the bands 1300-1350 MHz, 2700-2900 MHz and 9000-9200 MHz by the aeronautical radionavigation service is restricted to ground-based radars and to associated airborne transponders which transmit only on frequencies in these bands and only when

actuated by radars operating in the same band.  
**718**--In making assignments to stations of other services, administrations are urged to take all practicable steps to protect the spectral line observations of the radio astronomy service from harmful interference in the band 1 330-1 400 MHz. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).

**719**--In Bulgaria, Mongolia, Poland, the German Democratic Republic, Romania, Czechoslovakia and the U.S.S.R., the existing installations of the radionavigation service may continue to operate in the band 1350-1400 MHz. **(WARC-92)**

**720**--The bands 1 370-1 400 MHz, 2 640-2 655 MHz, 4 950-4 990 MHz and 15.20-15.35 GHz are also allocated to the space research (passive) and earth exploration-satellite (passive) services on a secondary basis.

**721**--All emissions in the band 1 400-1 427 MHz are prohibited.

**722**--In the bands 1 400-1 727 MHz, 101-120 GHz and 197-220 GHz, passive research is being conducted by some countries in a programme for the search for intentional emissions of extra-terrestrial origin.

**722A**--Use of the band 1452-1492 MHz by the broadcasting-satellite service and by the broadcasting service, is limited to digital audio broadcasting and is subject to the provisions of Resolution 528. **(WARC-92)**

**722B**--*Different category of service*: in the Federal Republic of Germany, Bangladesh, Botswana, Bulgaria, Burkina Faso, Colombia, Cuba, Denmark, Egypt, Ecuador, Spain, Greece, Hungary, Ireland, Italy, Jordan, Kenya, Malawi, Mozambique, Panama, Poland, Portugal, United Kingdom, Sri Lanka, Sweden, Swaziland, Czech and Slovak Federal Republic, Yemen, Yugoslavia and Zimbabwe, the allocation of the band 1452-1492 MHz to the broadcasting-satellite service and the broadcasting service is on a secondary basis until 1 April 2007. **(WARC-92)**

**722C**--*Alternative allocation*: in the United

States of America, the band 1452-1525 MHz is allocated to the fixed and mobile services on a primary basis (See also No. 723) **(WARC-92)**

**723**--In Region 2, in Australia and Papua New Guinea, the use of the band 1 435-1 535 MHz by the aeronautical mobile service for telemetry has priority over other uses by the mobile service.

**723A**--*Different category of service*: in Cuba, the band 1525-1530 MHz is allocated to the aeronautical mobile service on a primary basis, under the conditions specified in No. 723. **(Mob-87)**

**723B**--*Additional allocation*: in Belarus, the Russian Federation and Ukraine, the band 1429-1535 MHz is also allocated to the aeronautical mobile service on a primary basis exclusively for the purpose of aeronautical telemetry within the national territory. As of 1 April 2007, the use of the band 1452-1492 MHz is subject to agreement between the administrations concerned. **(WARC-92)**

**723C**--The use of the band 1492-1525 MHz by the mobile-satellite service is subject to the application of the coordination and notification procedures set forth in Resolution 46 (WARC-92). However, with the exception of the situation referred to in No. 723, on a provisional basis, coordination of space stations of the mobile-satellite service with respect to terrestrial services is required only if the power flux-density produced at the Earth's surface exceeds the limits in No. 2566. In respect of assignments operating in this band, the provisions of Section II, paragraph 2.2 of Resolution 46 (WARC-92) shall also be applied to geostationary transmitting space stations with respect to terrestrial stations. **(WARC-92)**

**724**--*Different category of service*: in Afghanistan, Saudi Arabia, Bahrain, Bulgaria, Cameroon, Egypt, the United Arab Emirates, France, Iran, Iraq, Israel, Kuwait, the Lebanon, Morocco, Mongolia, Oman, Poland, Qatar, Syria, the German Democratic Republic, Romania, Czechoslovakia, the U.S.S.R., Yemen and Yugoslavia, the allocation of the band 1525-1530

MHz to the mobile, except aeronautical mobile, service is on a primary basis (see No. 425). **(WARC-92)**

**725--Additional allocation:** in the U.S.S.R., the band 1 525-1 530 MHz is also allocated to the aeronautical mobile service on a primary basis.

**726A--**The bands 1525-1544 MHz, 1545-1559 MHz, 1626.5-1645.5 MHz and 1646.5-1660.5 MHz shall not be used for feeder links of any service. In exceptional circumstances, however, an earth station at a specified fixed point in any of the mobile-satellite services may be authorized by an administration to communicate via space stations using these bands. **(WARC-92)**

**726B--**The use of the bands 1525-1530 MHz, 1533-1544 MHz, 1626.5-1631.5 MHz and 1 634.5-1645.5 MHz by the land mobile-satellite service is limited to non-speech low bit-rate data transmissions. **(WARC-92)**

**726C--Additional allocation:** in Argentina, Australia, Brazil, Canada, the United States, Malaysia and Mexico, the band 1530-1544 MHz is also allocated to the mobile-satellite (space-to-Earth) service and the band 1626.5-1645.5 MHz is also allocated to the mobile-satellite (Earth-to-space) service, on a primary basis subject to the following conditions: maritime mobile-satellite distress and safety communications shall have priority access and immediate availability over all other mobile-satellite communications operating under this provision. Communications of mobile-satellite system stations not participating in the global maritime distress and safety system (GMDSS) shall operate on a secondary basis to distress and safety communications of stations operating in the GMDSS. Account shall be taken of the priority of safety-related communications in the other mobile-satellite services. **(WARC-92)**

**726D--**The use of the bands 1525-1559 and 1626.5-1660.5 MHz by the mobile-satellite services are subject to the application of the coordination and notification procedures set forth in Resolution 46 (WARC-92). In Regions 1 and 3 in the band 1525-1530 MHz

coordination of space stations of the mobile-satellite services with respect to terrestrial services is required only if the power flux-density produced at the Earth's surface exceeds the limits in No.2566. In respect of assignments operating in the band 1525-1530 MHz, the provisions of Section II, paragraph 2.2 of Resolution 46 (WARC-92) shall also be applied to geostationary transmitting space stations with respect to terrestrial stations. **(WARC-92)**

**727--Additional allocation:** in Afghanistan, Saudi Arabia, Bahrain, Bangladesh, the Congo, Egypt, the United Arab Emirates, Ethiopia, Iran, Iraq, Israel, Jordan, Kuwait, the Lebanon, Malta, Morocco, Niger, Oman, Pakistan, Qatar, Syria, Somalia, Sudan, Sri Lanka, Chad, Thailand, Togo, Yemen (P.D.R. of) and Zambia, the bands 1 540-1 645.5 MHz and 1 646.5-1 660 MHz are also allocated to the fixed service on a secondary basis.

**727A--**The use of the band 1544-1545 MHz by the mobile-satellite service (space-to-Earth) is limited to distress and safety communications (see Article N 38). **(Mob-87)**

**729--**Transmissions in the band 1545-1555 MHz from terrestrial aeronautical stations directly to aircraft stations, or between aircraft stations, in the aeronautical mobile (R) service are also authorized when such transmissions are used to extend or supplement the satellite-to-aircraft links. **(Mob-87)**

**729A--**Notwithstanding any other provisions of the Radio Regulations relating to restrictions in the use of the bands allocated to the aeronautical mobile-satellite (R) service for public correspondence, the bands 1545-1555 MHz and 1646.5-1656.5 MHz may be authorized by administrations for public correspondence with aircraft earth stations. Such communications must cease immediately, if necessary, to permit transmission of messages with priority 1 to 6 in Article 51. **(Mob-87)**

**730--Additional allocation:** in the Federal Republic of Germany, Austria, Bulgaria, Cameroon, Spain, France, Guinea, Hungary, Indonesia, Libya, Mali, Mongolia, Nigeria, Poland, the

German Democratic Republic, Romania, Senegal, Tanzania, Czechoslovakia and the U.S.S.R., the bands 1550-1645.5 MHz and 1646.5-1660 MHz are also allocated to the fixed service on a primary basis. **(WARC-92)**

**730A**--In the bands 1555-1559 and 1656.5-1660.5 MHz administrations may also authorize aircraft earth stations and ship earth stations to communicate with space stations in the land mobile-satellite service (see Resolution 208 (Mob-87)). **(Mob-87)**

**730B**--*Alternative allocation*: in Australia, Canada and Mexico, the band 1555-1559 MHz is allocated to the mobile-satellite (space-to-Earth) service, the band 1656.5-1660 MHz is allocated to the mobile-satellite (Earth-to-space) service, and the band 1660-1660.5 MHz is allocated to the mobile-satellite (Earth-to-space) and the radio astronomy services, on a primary basis. **(WARC-92)**

**730C**--*Alternative allocation*: in Argentina and the United States, the band 1555-1559 MHz is allocated to the mobile-satellite (space-to-Earth) service, the band 1656.5-1660 MHz is allocated to the mobile-satellite (Earth-to-space) service and the band 1660-1660.5 MHz is allocated to the mobile-satellite (Earth-to-space) and radio astronomy services, on a primary basis subject to the following conditions: the aeronautical mobile-satellite (R) service shall have priority access and immediate availability over all other mobile-satellite communications within a network operating under this provision; mobile-satellite systems shall be interoperable with the aeronautical mobile-satellite (R) service; account shall be taken of the priority of safety-related communications in the other mobile-satellite services. **(WARC-92)**

**731**--*Alternative allocation*: in Sweden, the band 1590-1626.5 MHz is allocated to the aeronautical radionavigation service on a primary basis. **(Mob-87)**

**731E**--The use of the band 1610-1626.5 MHz by the mobile-satellite service (Earth-to-space) and by the radiodetermination-satellite service (Earth-to-space) is subject to the application of

the coordination and notification procedures set forth in Resolution 46 (WARC-92). A mobile earth station operating in either of the services in this band shall not produce an e.i.r.p. density in excess of -15 dB(W/4kHz) in the part of the band used by systems operating in accordance with the provisions of No. 732, unless otherwise agreed by the affected administrations. In the part of the band where such systems are not operating, a value of -3dB(W/4kHz) is applicable. Stations of the mobile-satellite service shall not cause harmful interference to, or claim protection from, stations in the aeronautical radionavigation service, stations operating in accordance with the provisions of No. 732 and stations in the fixed service operating in accordance with the provisions of No. 730. **(WARC-92)**

**731F**--The use of the band 1613.8-1626.5 MHz by the mobile-satellite service (space-to-Earth) is subject to the application of the coordination and notification procedures set forth in Resolution 46 (WARC-92).

**732**--The band 1 610-1 626.5 MHz is reserved on a worldwide basis for the use and development of airborne electronic aids to air navigation and any directly associated ground-based or satellite-borne facilities. Such satellite use is subject to agreement obtained under the procedure set forth in Article 14.

**733**--The bands 1 610-1 626.5 MHz, 5 000-5 250 MHz and 15.4-15.7 GHz are also allocated to the aeronautical mobile-satellite (R) service on a primary basis. Such use is subject to agreement obtained under the procedure set forth in Article 14.

**733A**--With respect to the radiodetermination-satellite and mobile-satellite services, the provisions of No. 953 do not apply in the frequency band 1610-1626.5 MHz. **(WARC-92)**

**733B**--*Different category of service*: in Angola, Australia, Burundi, Cote d'Ivoire, Ethiopia, India, Islamic Republic of Iran, Israel, Italy, Jordan, Kenya, Lebanon, Liberia, Libya, Madagascar, Mali, Pakistan, Papua New Guinea, Senegal, Sudan, Swaziland, Syria, Tanzania,

Thailand, Togo, Zaire and Zambia, the allocation of the band 1610-1626.5 MHz to the radiodetermination-satellite service (Earth-to-space) is on a primary basis (see No. 425) subject to agreement obtained under the procedure set forth in Article 14 with other countries not listed in this provision. **(Mob-87)**

**733C**--*Different category of service:* in Venezuela, the allocation to the radiodetermination-satellite service in the band 1610-1626.5 MHz (Earth-to-space) is on a secondary basis. **(Mob-87)**

**733D**--*Alternative allocation:* in Cuba, the band 1610-1626.5 MHz is allocated exclusively to the aeronautical radionavigation service on a primary basis. **(Mob-87)**

**733E**--Harmful interference shall not be caused to stations of the radio astronomy service using the band 1610.6-1613.8 MHz by stations of the radiodetermination-satellite and mobile-satellite services. (No. 2904 applies.) **(WARC-92)**

**733F**--In Region 1, the bands 1610-1626.5 MHz (Earth-to-space) and 2483.5-2500 MHz (space-to-Earth) are also allocated to the radiodetermination-satellite service on a secondary basis. **(Mob-87)**

**734**--In making assignments to stations of other services, administrations are urged to take all practicable steps to protect the radio astronomy service in the band 1610.6-1613.8 MHz from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36). **(WARC-92)**

**734A**--Land earth stations and ship earth stations in the mobile-satellite services operating in the bands 1631.5-1634.5 and 1656.5-1660 MHz shall not cause harmful interference to the stations in the fixed service operating in the countries listed in No. 730. **(Mob-87)**

**734B**--The use of the band 1645.5-1646.5 MHz by the mobile-satellite service (Earth-to-space) and for inter-satellite links is limited to distress and safety communications (see Article N 38). **(Mob-87)**

**735**--Transmissions in the band 1646.5-1656.5 MHz from aircraft stations in the aeronautical mobile (R) service directly to terrestrial aeronautical stations, or between aircraft stations, are also authorized when such transmissions are used to extend or supplement the aircraft-to-satellite links. **(Mob-87)**

**735A**--In the band 1675-1710 MHz, stations in the mobile-satellite service shall not cause harmful interference to, nor constrain the development of, the meteorological-satellite and meteorological aids service (see Resolution 213) (WARC-92) and the use of this band shall be subject to the provisions of Resolution 46. **(WARC-92)**

**736**--In making assignments to stations of other services to which the band 1 660-1 670 MHz is allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).

**737**--*Different category of service:* in Afghanistan, Saudi Arabia, Bahrain, Benin, Bulgaria, Cameroon, the Central African Republic, the Congo, Cuba, Egypt, the United Arab Emirates, Ethiopia, Hungary, India, Indonesia, Iran, Israel, Kenya, Kuwait, the Lebanon, Malaysia, Mongolia, Oman, Uganda, Pakistan, Poland, Qatar, Syria, the German Democratic Republic, Singapore, Somalia, Sri Lanka, Chad, Czechoslovakia, Thailand, Tunisia, the U.S.S.R., Yemen A. R., Yemen (P.D.R. of) and Yugoslavia, the allocation of the band 1 660.5-1 668.4 MHz to the fixed and the mobile, except aeronautical mobile, service is on a primary basis until 1 January 1990 (see No. 425).

**738**--*Additional allocation:* in Bangladesh, India, Indonesia, Nigeria, Pakistan, Sri Lanka and Thailand, the band 1660.5-1668.4 MHz is also allocated to the meteorological aids service on a secondary basis.

**739**--In view of the successful detection by radio astronomers of two hydroxyl spectral lines

in the region of 1665 MHz and 1667 MHz, administrations are urged to give all practicable protection in the band 1660.5-1668.4 MHz for future research in radio astronomy, particularly by eliminating air-to-ground transmissions in the meteorological aids service in the band 1664.4-1668.4 MHz as soon as practicable.

**740--Additional allocation:** in Afghanistan, Costa Rica, Cuba, India, Iran, Malaysia, Pakistan, Singapore, Sri Lanka and Thailand, the band 1 690-1 700 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

**740A--**The bands 1670-1675 MHz and 1800-1805 MHz are intended for use, on a world-wide basis, by administrations wishing to implement aeronautical public correspondence. The use of the band 1670-1675 MHz by stations in the systems for public correspondence with aircraft is limited to transmissions from aeronautical stations and the use of the band 1800-1805 MHz is limited to transmissions from aircraft stations. **(WARC-92)**

**741--Different category of service:** in Saudi Arabia, Austria, Bahrain, Bulgaria, the Congo, Egypt, the United Arab Emirates, Ethiopia, Guinea, Hungary, Iraq, Israel, Jordan, Kenya, Kuwait, the Lebanon, Mauritania, Mongolia, Oman, Poland, Qatar, Syria, the German Democratic Republic, Romania, Somalia, Tanzania, Czechoslovakia, the U.S.S.R., Yemen A.R., Yemen (P.D.R. of) and Yugoslavia, the allocation of the band 1 690-1 700 MHz to the fixed and mobile, except aeronautical mobile, services is on a primary basis (see No. 425).

**742--Additional allocation:** in Australia and Indonesia, the band 1 690-1 700 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a secondary basis.

**743--Additional allocation:** in India, Indonesia, Japan and Thailand, the band 1 700-1 710 MHz is also allocated to the space research service (space-to-Earth) on a primary basis.

**744--**The band 1 718.8-1 722.2 MHz is also allocated to the radio astronomy service on a

secondary basis for spectral line observations. In making assignments to stations of other services to which the band is allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).

**745--**Subject to agreement obtained under the procedure set forth in Article 14 and having particular regard to tropospheric scatter systems, the band 1 750-1 850 MHz may also be used for space operation (Earth-to-space) and space research (Earth-to-space) services in Region 2, in Afghanistan, Australia, India, Indonesia, Japan and Thailand.

**746--Additional allocation:** in Bulgaria, Cuba, Mali, Mongolia, Poland, the German Democratic Republic, Romania, Czechoslovakia and the U.S.S.R., the band 1 770-1 790 MHz is also allocated to the meteorological-satellite service on a primary basis, subject to agreement obtained under the procedure set forth in Article 14. **(WARC-92)**

**746A--**The frequency bands 1885-2025 MHz and 2110-2200 MHz are intended for use, on a worldwide basis, by administrations wishing to implement the future public land mobile telecommunication systems (FPLMTS). Such use does not preclude the use of these bands by other services to which these bands are allocated.

The frequency bands should be made available for FPLMTS in accordance with Resolution 212. **(WARC-92)**

**746B--**The use of the bands 1970-2010 MHz and 2160-2200 MHz by the mobile-satellite service shall not commence before 1 January 2005 and is subject to the application of the coordination and notification procedures set forth in Resolution 46 (WARC-92). In the band 2160-2200 MHz coordination of space stations of the mobile-satellite service with respect to terrestrial services is required only if the power flux-density produced at the Earth's surface

exceeds the limits in No. 2566. In respect of assignments operating in this band, the provisions of Section II, paragraph 2.2 of Resolution 46 (WARC-92) shall also be applied to geostationary transmitting space stations with respect to terrestrial stations. **(WARC-92)**

**746C**--In the United States, the use of the bands 1970-2010 MHz and 2160-2200 MHz by the mobile-satellite service shall not commence before 1 January 1996. **(WARC-92)**

**747A**--In making assignments to the mobile service in the bands 2025-2110 MHz and 2200-2290 MHz, administrations shall take into account Resolution 211. **(WARC-92)**

**750A**--Administrations are urged to take all practicable measures to ensure that space-to-space transmissions between two or more non-geostationary satellites in the space research, space operation and Earth exploration-satellite services in the bands 2025-2110 MHz and 2200-2290 MHz, shall not impose any constraints on Earth-to-space, space-to-Earth and other space-to-space transmissions of those services and in those bands between geostationary and non-geostationary satellites. **(WARC-92)**

**750B**--*Additional allocation*: in the United States and India, the band 2310-2360 MHz is also allocated to the broadcasting-satellite service (sound) and complementary terrestrial sound broadcasting service on a primary basis. Such use is limited to digital audio broadcasting and is subject to the provisions of Resolution 528. **(WARC-92)**

**751**--In Australia, the United States and Papua New Guinea, the use of the band 2300-2390 MHz by the aeronautical mobile service for telemetry has priority over other uses by the mobile services. In Canada, the use of the band 2300-2483.5 MHz by the aeronautical mobile service for telemetry has priority over other uses by the mobile services. **(WARC-92)**

**751A**--In France, the use of the band 2310-2360 MHz by the aeronautical mobile service for telemetry has priority over other uses by the mobile service. **(WARC-92)**

**751B**--Space stations of the broadcasting-satellite service in the band 2310-2360 MHz operating in accordance with No. 750B that may affect the services to which this band is allocated in other countries shall be coordinated and notified in accordance with Resolution 33 (WARC-92). Complementary terrestrial broadcasting stations shall be subject to bilateral coordination with neighboring countries prior to their bringing into use. **(WARC-92)**

**752**--The band 2 400-2 500 MHz (center frequency 2 450 MHz) is designated for industrial, scientific and medical (ISM) applications. Radio services operating within this band must accept harmful interference which may be caused by these applications. ISM equipment operating in this band is subject to the provisions of No. 1815.

**753**--*Different category of service*: in France, the band 2450-2500 MHz is allocated on a primary basis to the radiolocation service (see No. 425). Such use is subject to agreement with administrations having services operating or planned to operate in accordance with the Table of Frequency Allocations which may be affected. **(WARC-92)**

**753A**--In respect of the radiodetermination-satellite service in the band 2483.5-2500 MHz, the provisions of No. 953 do not apply. **(Mob-87)**

**753B**--In Region 1, in countries other than those listed in No. 753C, harmful interference shall not be caused to, or protection shall not be claimed from, stations of the radio-location service by stations of the radio-determination-satellite service. **(Mob-87)**

**753C**--*Different category of service*: in Angola, Australia, Bangladesh, Burundi, China, Cote d'Ivoire, Ethiopia, India, the Islamic Republic of Iran, Israel, Italy, Jordan, Kenya, Lebanon, Liberia, Libya, Madagascar, Mali, Pakistan, Papua New Guinea, Senegal, Sudan, Swaziland, Syria, Tanzania, Thailand, Togo, Zaire and Zambia, the allocation of the band 2483.5-2500 MHz to the radiodetermination-satellite service



(space-to-Earth) is on a primary basis (see No. 425) subject to agreement obtained under the procedure of Article 14 with other countries not listed in this provision. **(WARC-92)**

**753D--Alternative allocation:** in Cuba, the band 2483.5-2500 MHz is allocated only to fixed, mobile and radiolocation services on a primary basis. **(Mob-87)**

**753F--**The use of the band 2483.5-2500 MHz by the mobile-satellite and the radiodetermination-satellite services is subject to the application of the coordination and notification procedures set forth in Resolution 46 (WARC-92). Coordination of space stations of the mobile-satellite and radiodetermination-satellite services with respect to terrestrial services is required only if the power flux-density produced at the Earth's surface exceeds the limits in No. 2566. In respect of assignments operating in this band, the provisions of Section II, paragraph 2.2 of Resolution 46 (WARC-92) shall also be applied to geostationary transmitting space stations with respect to terrestrial stations. **(WARC-92)**

**754--**Subject to agreement obtained under the procedure set forth in Article 14, the band 2520-2535 MHz (until 1 January 2005 the band 2500-2535 MHz) may also be used for the mobile-satellite (space-to-Earth), except aeronautical mobile-satellite, service for operation limited to within national boundaries. The coordination and notification procedures set forth in Resolution 46 (WARC-92) apply. However coordination of space stations of the mobile-satellite service with respect to terrestrial services is required only if the power flux-density produced by the station exceeds the limits in No. 2566. **(WARC-92)**

**754A--Additional allocation:** subject to agreement obtained under the procedure set forth in Article 14, the band 2500-2516.5 MHz may also be used in India, the Islamic Republic of Iran, Papua New Guinea and Thailand for the radiodetermination-satellite service (space-to-Earth) for operation limited to within national boundaries. **(Mob-87)**

**754B--Additional allocation:** in France, the band 2500-2550 MHz is also allocated to the radiolocation service on a primary basis. Such use is subject to agreement with the administrations having services operating or planned to operate in accordance with the Table which may be affected. **(WARC-92)**

**755--Additional allocation:** in Canada, the band 2 500-2 550 MHz is also allocated to the radiolocation service on a primary basis.

**755A--**In the band 2500-2520 MHz, power flux-density at the surface of the Earth from space stations operating in the mobile-satellite (space-to-Earth) service shall not exceed -152 db(W/m<sup>2</sup>/4kHz) in Argentina, unless otherwise agreed by the administrations concerned. **(WARC-92)**

**756--Additional allocation:** in the United Kingdom, the band 2 500-2 600 MHz is also allocated to the radiolocation service on a secondary basis.

**757--**The use of the band 2520-2670 MHz by the broadcasting-satellite service is limited to national and regional systems for community reception and such use shall be subject to agreement obtained under the procedure set forth in Article 14. The power flux-density at the Earth's surface shall not exceed the values given in Nos. 2561 to 2564. **(WARC-92)**

**757A--Additional allocation:** in Bangladesh, Belarus, China, the Republic of Korea, the Russian Federation, India, Japan, Pakistan, Singapore, Sri Lanka, Thailand and Ukraine, the band 2535-2655 MHz is also allocated to the broadcasting-satellite service (sound) and complementary terrestrial broadcasting service on a primary basis. Such use is limited to digital audio broadcasting and is subject to provisions of Resolution 528 (WARC-92). The provisions of Nos. 757 and 2561 to 2564 do not apply to this additional allocation. **(WARC-92)**

**758--Alternative allocation:** in the Federal Republic of Germany and Greece, the band 2520-2670 MHz is allocated to the fixed service on a primary basis. **(WARC-92)**

**759--Alternative allocation:** in Bulgaria and the

U.S.S.R., the band 2 500-2 690 MHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

**760**--In the design of systems in the broadcasting-satellite service in the bands between 2500 MHz and 2690 MHz, administrations are urged to take all necessary steps to protect the radio astronomy service in the band 2690-2700 MHz.

**760A**--The allocation of the frequency band 2500-2520 MHz to the mobile-satellite service (space-to-Earth) shall be effective on 1 January 2005 and is subject to the application of the coordination and notification procedures set forth in Resolution 46 (WARC-92). Coordination of space stations of the mobile-satellite service with respect to terrestrial services is required only if the power flux-density produced at the Earth's surface exceeds the limits in No. 2566. In respect of assignments operating in this band, the provisions of Section II, paragraph 2.2 of Resolution 46 (WARC-92) shall also be applied to geostationary transmitting space stations with respect to terrestrial stations. **(WARC-92)**

**761**--The use of the bands 2500-2690 MHz in Region 2 and 2500-2535 MHz and 2655-2690 MHz in Region 3 by the fixed-satellite service is limited to national and regional systems; such use shall be subject to agreement obtained under the procedure set forth in Article 14, giving particular attention to the broadcasting-satellite service in Region 1. In the direction space-to-Earth, the power flux-density at the Earth's surface shall not exceed the values given in Nos. 2561 to 2564.

**762**--Administrations shall make all practicable efforts to avoid developing new tropospheric scatter systems in the band 2 500-2 690 MHz.

**763**--Subject to agreement obtained under the procedure set forth in Article 14, the band 2500-2690 MHz may be used for tropospheric scatter systems in Region 1.

**764**--When planning new tropospheric scatter radio-relay links in the band 2 500-2 690 MHz, all possible measures shall be taken to avoid directing the antennae of these links towards the

geostationary-satellite orbit.

**764A**--The allocation of the frequency band 2670-2690 MHz to the mobile-satellite service shall be effective from 1 January 2005. When introducing mobile-satellite systems in this band administrations shall take all necessary steps to protect the satellite systems operating in this band prior to 3 March 1992. The coordination of mobile-satellite systems in this band shall be in accordance with Resolution 46. **(WARC-92)**

**765**--In making assignments to stations of other services, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference in the band 2 655-2 690 MHz. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).

**766**--Subject to agreement obtained under the procedure set forth in Article 14, the band 2655-2670 MHz (until 1 January 2005 the band 2655-2690 MHz) may also be used for the mobile - satellite (Earth-to-space), except aeronautical mobile-satellite, service for operation limited to within national boundaries. The coordination and notification procedures set forth in Resolution 46 apply. **(WARC-92)**

**767**--*Additional allocation:* in the Federal Republic of Germany and Austria, the band 2690-2695 MHz is also allocated to the fixed service on a primary basis. Such use is limited to equipment in operation by 1 January 1985.

**768**--All emissions in the band 2 690-2 700 MHz are prohibited, except those provided for by Nos. 767 and 769.

**769**--*Additional allocation:* in Afghanistan, Saudi Arabia, Bahrain, Brunei Darussalom, Bulgaria, Cameroon, the Central African Republic, the Congo, Cote d'Ivoire, Cuba, Egypt, the United Arab Emirates, Ethiopia, Gabon, Guinea, Guinea-Bissau, Iran, Iraq, Israel, Jordan, the Lebanon, Malaysia, Malawi, Mali, Morocco, Mauritania, Mongolia, Nigeria, Oman, Pakistan, the Philippines, Poland, Qatar, Syria, the German Democratic Republic, Romania,

Singapore, Somalia, Sri Lanka, Czechoslovakia, Thailand, Tunisia, the U.S.S.R., Yemen, Yugoslavia, Zaire and Zambia, the band 2690-2700 MHz is also allocated to the fixed and mobile except aeronautical mobile, services on a primary basis. Such use is limited to equipment in operation by 1 January 1985. **(WARC-92)**

**770--**In the band 2 700-2 900 MHz, ground-based radars used for meteorological purposes are authorized to operate on a basis of equality with stations of the aeronautical radionavigation service.

**771--Additional allocation:** in Canada, the band 2850-2900 MHz is also allocated to the maritime radionavigation service, on a primary basis, for use by shore-based radars.

**772--**In the band 2900-3100 MHz, the use of the shipborne interrogator-transponder system (SIT) shall be confined to the sub-band 2930-2950 MHz.

**773--**The use of the band 2 900-3 100 MHz by the aeronautical radionavigation service is limited to ground-based radars. **(Mob-87)**

**775A--**In the bands 2900-3100 MHz and 9300-9500 MHz, the response from radar transponders shall not be capable of being confused with the response from radar beacons (racons) and shall not cause interference to ship or aeronautical radars in the radionavigation service, having regard, however, to No. 347 of these Regulations. **(Mob-87)**

**777--Additional allocation:** in Bulgaria, Canada, Cuba, Mongolia, Poland, the German Democratic Republic, Romania, Czechoslovakia and the U.S.S.R., the band 3 100-3 300 MHz is also allocated to the radionavigation service on a primary basis. **(WARC-92)**

**778--**In making assignments to stations of other services, administrations are urged to take all practicable steps to protect the spectral line observations of the radio astronomy service from harmful interference in the bands 3260-3267 MHz, 3332-3339 MHz, 3345.8-3352.5 MHz and 4825-4835 MHz. Emissions from space or airborne stations can be particularly serious sources of interference to the radio

astronomy service (see Nos. 343 and 344 and Article 36).

**779--Additional allocation:** in Afghanistan, Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, China, the Congo, the United Arab Emirates, India, Indonesia, Iran, Iraq, Israel, Japan, Jordan, Kuwait, the Lebanon, Libya, Malaysia, Oman, Pakistan, Qatar, Democratic People's Republic of Korea, Syria, Singapore, Sri Lanka, Thailand and Yemen the band 3300-3400 MHz is also allocated to the fixed and mobile services on a primary basis. The countries bordering the Mediterranean shall not claim protection for their fixed and mobile services from the radiolocation service. **(WARC-92)**

**780--Additional allocation:** in Bulgaria, Cuba, Mongolia, Poland, the German Democratic Republic, Romania, Czechoslovakia and the U.S.S.R., the band 3300-3400 MHz is also allocated to the radio-navigation service on a primary basis. **(WARC-92)**

**781--Additional allocation:** in the Federal Republic of Germany, Israel, Nigeria and the United Kingdom, the band 3 400-3 475 MHz is also allocated to the amateur service on a secondary basis.

**783--Different category of service:** in Indonesia, Japan, Pakistan and Thailand, the allocation of the band 3 400-3 500 MHz to the mobile, except aeronautical mobile, service is on a primary basis (see No. 425).

**784--**In Regions 2 and 3, in the band 3 400-3 600 MHz the radiolocation service is allocated on a primary basis. However, all administrations operating radiolocation systems in this band are urged to cease operations by 1985. Thereafter, administrations shall take all practicable steps to protect the fixed-satellite service and coordination requirements shall not be imposed on the fixed-satellite service.

**785--**In Denmark, Norway and the United Kingdom, the fixed, radiolocation and fixed-satellite services operate on a basis of equality of rights in the band 3 400-3 600 MHz. However, these Administrations operating radiolocation

systems in this band are urged to cease operations by 1985. After this date, these Administrations shall take all practicable steps to protect the fixed-satellite service and coordination requirements shall not be imposed on the fixed-satellite service.

**786--**In Japan, in the band 3 620-3 700 MHz, the radiolocation service is excluded.

**787--Additional allocation:** in New Zealand, the band 3 700-3 770 MHz is also allocated to the radiolocation service on a secondary basis.

**788--Additional allocation:** in the Federal Republic of Germany, Denmark, Norway and Sweden, the band 4 200-4 210 MHz is also allocated to the fixed service on a secondary basis.

**789--**Use of the band 4 200-4 400 MHz by the aeronautical radionavigation service is reserved exclusively for radio altimeters installed on board aircraft and for the associated transponders on the ground. However, passive sensing in the earth exploration-satellite and space research services may be authorized in this band on a secondary basis (no protection is provided by the radio altimeters).

**790--Additional allocation:** in China, Iran, Libya, the Philippines and Sri Lanka, the band 4200-4400 MHz is also allocated to the fixed service on a secondary basis.

**791--**The standard frequency and time signal-satellite service may be authorized to use the frequency 4202 MHz for space-to-Earth transmissions and the frequency 6427 MHz for Earth-to-space transmissions. Such transmissions shall be confined within the limits of  $\pm 2$  MHz of these frequencies and shall be subject to agreement obtained under the procedure set forth in Article 14.

**792A--**The use of the bands 4500-4800 MHz, 6725-7025 MHz, 10.7-10.95 GHz, 11.2-11.45 GHz and 12.75-13.25 GHz by the fixed-satellite service shall be in accordance with the provisions of Appendix 30B. **(Orb-88)**

**793--**In the bands 4825-4835 MHz and 4950-4990 MHz, the allocation to the mobile service is restricted to the mobile, except aeronautical

mobile, service.

**794--Different category of service:** in Argentina, Australia and Canada, the allocation of the bands 4 825-4 835 MHz and 4 950-4 990 MHz to the radio astronomy service is on a primary basis (see No. 425). In making assignments to stations of other services to which these bands are allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).

**795--**In making assignments to stations of other services to which the band 4 990-5 000 MHz is allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).

**796--**The band 5 000-5 250 MHz is to be used for the operation of the international standard system (microwave landing system) for precision approach and landing. The requirements of this system shall take precedence over other uses of this band.

**797--**The bands 5 000-5 250 MHz and 15.4-15.7 GHz are also allocated to the fixed-satellite service and the inter-satellite service, for connection between one or more earth stations at specified fixed points on the Earth and space stations, when these services are used in conjunction with the aeronautical radionavigation and/or aeronautical mobile (R) service. Such use shall be subject to agreement obtained under the procedure set forth in Article 14.

**797A--Additional allocation:** in the countries listed in Nos. 733B and 753C, and subject to agreement obtained under the procedure set forth in Article 14, the band 5150-5216 MHz is also allocated to the radio-determination-satellite service (space-to-Earth) on a primary basis. In Region 2, the band is also allocated to

the radiodetermination-satellite service (space-to-Earth) on a primary basis. In Regions 1 and 3, except those countries listed in Nos. 733B and 753C, the band is also allocated to the radiodetermination-satellite service (space-to-Earth) on a secondary basis. The use by the radiodetermination-satellite service is limited to feeder links in conjunction with the radiodetermination-satellite service operating in the bands 1610-1626.5 MHz and/or 2483.5-2500 MHz. The total power flux-density at the Earth's surface shall in no case exceed  $-159$  dBw/m<sup>2</sup> in any 4 kHz band for all angles of arrival. **(Mob-87)**

**797B--Additional allocation:** in the Federal Republic of Germany, Austria, Belgium, Denmark, Spain, France, Finland, Greece, Israel, Italy, Japan, Jordan, the Lebanon, Liechtenstein, Luxembourg, Morocco, Malta, Norway, the Netherlands, Pakistan, Portugal, the United Kingdom, Sweden, Switzerland, Syria and Tunisia, the band 5150-5250 MHz is also allocated to the mobile service, on a primary basis, subject to the agreement obtained under the procedure set forth in Article 14. **(WARC-92)**

**798--Additional allocation:** in Austria, Bulgaria, Libya, Mongolia, Poland, the German Democratic Republic, Romania, Czechoslovakia and the U.S.S.R., the band 5 250-5 350 MHz is also allocated to the radionavigation service on a primary basis. **(WARC-92)**

**799--**The use of the band 5 350-5 470 MHz by the aeronautical radionavigation service is limited to airborne radars and associated airborne beacons.

**800--Additional allocation:** in Afghanistan, Austria, Bulgaria, Iran, Mongolia, Poland, the German Democratic Republic, Romania, Czechoslovakia, and the U.S.S.R., the band 5 470-5 650 MHz is also allocated to the aeronautical radionavigation service on a primary basis. **(WARC-92)**

**801--Additional allocation:** in the United Kingdom, the band 5 470-5 850 MHz is also allocated to the land mobile service on a secondary basis. The power limits specified in Nos. 2502, 2505, 2506 and 2507 shall apply in the band 5

725-5 850 MHz.

**802--**Between 5600 MHz and 5650 MHz, ground based radars used for meteorological purposes are authorized to operate on a basis of equality with stations of the maritime radionavigation service.

**803--Additional allocation:** in Afghanistan, Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, the Central African Republic, China, the Congo, the Republic of Korea, Egypt, the United Arab Emirates, Gabon, Guinea, India, Indonesia, Iran, Iraq, Israel, Japan, Jordan, Kuwait, the Lebanon, Libya, Madagascar, Malaysia, Malawi, Niger, Nigeria, Oman, Pakistan, the Philippines, Qatar, Democratic People's Republic of Korea, Syria, Singapore, Sri Lanka, Swaziland, Tanzania, Chad, Thailand and Yemen, the band 5 650-5 850 MHz is also allocated to the fixed and mobile services on a primary basis. **(WARC-92)**

**804--Different category of service:** in Bulgaria, Cuba, Mongolia, Poland, the German Democratic Republic, Czechoslovakia and the U.S.S.R., the allocation of the band 5 670-5 725 MHz to the space research service is on a primary basis (see No. 425). **(WARC-92)**

**805--Additional allocation:** in Bulgaria, Cuba, Hungary, Mongolia, Poland, the German Democratic Republic, Czechoslovakia and the U.S.S.R., the band 5 670-5 850 MHz is also allocated to the fixed service on a primary basis.

**806--**The band 5 725-5 875 MHz (center frequency 5 800 MHz) is designated for industrial, scientific and medical (ISM) applications. Radiocommunication services operating within this band must accept harmful interference which may be caused by these applications. ISM equipment operating in this band is subject to the provisions of No. 1815.

**807--Additional allocation:** in the Federal Republic of Germany and in Cameroon, the band 5 755-5 850 MHz is also allocated to the fixed service on a primary basis.

**808--**The band 5 830-5 850 MHz is also allocated in the amateur-satellite service (space-to-Earth) on a secondary basis.

**809**--In the band 6 425-7 075 MHz, passive microwave sensor measurements are carried out over the oceans. In the band 7 075-7 250 MHz, passive microwave sensor measurements are carried out. Administrations should bear in mind the needs of the earth exploration-satellite (passive) and space research (passive) services in their future planning of this band.

**810**--Subject to agreement obtained under the procedure set forth in Article 14, in Region 2, the band 7 125-7 155 MHz may be used for Earth-to-space transmissions in the space operation service.

**811**--Subject to agreement obtained under the procedure set forth in Article 14, the band 7 145-

7 235 MHz may be used for Earth-to-space transmissions in the space research service. The use of the band 7 145-7 190 MHz is restricted to deep space; no emissions to deep space shall be effected in the band 7 190-7 235 MHz.

**812**--The bands 7 250-7 375 MHz (space-to-Earth) and 7 900-8 025 MHz (Earth-to-space) may also be used by the mobile-satellite service. The use of these bands by this service shall be subject to agreement obtained under the procedure set forth in Article 14.

**813**--In the band 8 025-8 400 MHz, the power flux-density limits specified in No. 2570 shall apply in Regions 1 and 3 to the earth exploration-satellite service.

**814**--In Region 2, aircraft stations are not permitted to transmit in the band 8025-8400 MHz.

**815**--Subject to agreement obtained under the procedure set forth in Article 14, the band 8025-8400 MHz may be used for the earth exploration-satellite service (space-to-Earth) in Bangladesh, Benin, Cameroon, China, the Central African Republic, the Ivory Coast, Egypt, France, Guinea, Upper Volta, India, Iran, Israel, Italy, Japan, Kenya, Libya, Mali, Niger, Pakistan, Senegal, Somalia, Sudan, Sweden, Tanzania, Zaire and Zambia, on a primary basis.

**816**--In the space research service, the use of the band 8 400-8 450 MHz is limited to deep space.

**817**--*Different category of service*: in Belgium, Israel, Luxembourg, Malaysia, Singapore and Sri Lanka, the allocation of the band 8400-8500 MHz to the space research service is on a secondary basis (see No. 424).

**818**--*Alternative allocation*: in the United Kingdom, the band 8 400-8 500 MHz is allocated to the radiolocation and space research services on a primary basis.

**819**--*Additional allocation*: in Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Burundi, Cameroon, China, the Congo, Costa Rica, Egypt, the United Arab Emirates, Gabon, Guinea, Guyana, Indonesia, Iran, Iraq, Israel, Jamaica, Jordan, Kuwait, the Lebanon, Libya, Malaysia, Mali, Morocco, Mauritania, Nepal, Niger, Nigeria, Oman, Pakistan, Qatar, Democratic People's Republic of Korea, Syria, Senegal, Singapore, Somalia, Sri Lanka, Swaziland, Tanzania, Chad, Thailand, Togo, Tunisia and Yemen, the band 8 500-8 750 MHz is also allocated to the fixed and mobile services on a primary basis. **(WARC-92)**

**820**--*Additional allocation*: in Bulgaria, Hungary, Mongolia, Poland, the German Democratic Republic, Romania, Czechoslovakia and the U.S.S.R., the band 8 500-8 750 MHz is also allocated to the land mobile and radionavigation service on a primary basis.

**821**--The use of the band 8 750-8 850 MHz by the aeronautical radionavigation service is limited to airborne Doppler navigation aids on a center frequency of 8 800 MHz.

**822**--*Additional allocation*: in Algeria, the Federal Republic of Germany, Bahrain, Belgium, China, the United Arab Emirates, France, Greece, Indonesia, Iran, Libya, the Netherlands, Qatar, Sudan and Thailand, the bands 8 825-8 850 MHz and 9 000-

9 200 MHz are also allocated to the maritime radionavigation service, on a primary basis, for use by shore-based radars only.

**823**--In the bands 8850-9000 MHz and 9200-9225 MHz, the maritime radionavigation service is limited to shore-based radars.

**824**--*Additional allocation*: in Austria, Bulgaria,

Cuba, Hungary, Mongolia, Poland, the German Democratic Republic, Romania, Czechoslovakia and the U.S.S.R., the bands 8850-9000 MHz and 9200-9300 MHz are also allocated to the radio-navigation service on a primary basis.

**824A**--In the band 9200-9500 MHz, search and rescue transponders (SART) may be used, having due regard to the appropriate CCIR Recommendation (see also Article N 38). **(Mob-87)**

**825**--The use of the band 9 300-9 500 MHz by the aeronautical radionavigation service is limited to airborne weather radars and ground-based radars. In addition, ground-based radar beacons in the aeronautical radionavigation service are permitted in the band 9300-9320 MHz on condition that harmful interference is not caused to the maritime radionavigation service. In the band 9300-9500 MHz, ground-based radars used for meteorological purposes have priority over other radiolocation devices.

**825A**--In the band 9300-9320 MHz in the radio-navigation service, the use of shipborne radars, other than those existing on 1 January 1976, is not permitted until 1 January 2001. **(Mob-87)**

**826**--*Different category of service*: in Afghanistan, Algeria, Saudi Arabia, Austria, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, the Republic of Korea, Egypt, the United Arab Emirates, Ethiopia, Guyana, India, Indonesia, Iran, Iraq, Israel, Jamaica, Japan, Jordan, Kuwait, the Lebanon, Liberia, Malaysia, Nigeria, Oman, Pakistan, Qatar, Singapore, Somalia, Sudan, Sri Lanka, Sweden, Thailand, Trinidad and Tobago, and Yemen, the allocation of the band 9800-10000 MHz to the fixed service is on a primary basis (see No. 425). **(WARC-92)**

**827**--*Additional allocation*: in Bulgaria, Hungary, Mongolia, Poland, the German Democratic Republic, Romania, Czechoslovakia and the U.S.S.R., the band 9 800-10 000 MHz is also allocated to the radionavigation service on a primary basis.

**828**--The band 9 975-10 025 MHz is also allocated to the meteorological-satellite service on a secondary basis for use by weather radars.

**829**--*Additional allocation*: in Costa Rica, Ecuador, Guatemala and Honduras, the band 10-10.45 GHz is also allocated to the fixed and mobile services on a primary basis.

**830**--*Additional allocation*: in the Federal Republic of Germany, Angola, China, Ecuador, Spain, Japan, Kenya, Morocco, Nigeria, Oman, Democratic People's Republic of Korea, Sweden, Tanzania and Thailand, the band 10.45-10.5 GHz is also allocated to the fixed and mobile services on a primary basis. **(WARC-92)**

**831**--In the band 10.6-10.68 GHz, stations of the fixed and mobile, except aeronautical mobile, services shall be limited to a maximum equivalent isotropically radiated power of 40 dBW and the power delivered to the antenna shall not exceed -3 dBW. These limits may be exceeded subject to agreement obtained under the procedure set forth in Article 14. However, in Afghanistan, Saudi Arabia, Bahrain, Bangladesh, China, the United Arab Emirates, Finland, India, Indonesia, Iran, Iraq, Japan, Kuwait, the Lebanon, Nigeria, Pakistan, the Philippines, Qatar, Syria and the U.S.S.R., the restrictions on the fixed and mobile, except aeronautical mobile, services are not applicable.

**832**--In making assignments to stations of other services to which the band 10.6-10.68 GHz is allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from space or air-borne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).

**833**--All emissions in the band 10.68-10.7 GHz are prohibited, except for those provided by No. 834. **(WARC-92)**

**834**--*Additional allocation*: in Saudi Arabia, Bahrain, Bulgaria, Cameroon, China, Colombia, the Republic of Korea, Costa Rica, Cuba, Egypt, the United Arab Emirates, Ecuador, Iran, Iraq, Israel, Japan, Jordan, Kuwait, the Lebanon, Mongolia, Pakistan, Poland, Qatar, the German Democratic Republic, Democratic People's Republic of Korea, Romania, Czechoslovakia,

the U.S.S.R., Yemen and Yugoslavia, the band 10.68-10.7 GHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. Such use is limited to equipment in operation by 1 January 1985.

**835**--In Region 1, the use of the band 10.7-11.7 GHz by the fixed-satellite service (Earth-to-space) is limited to feeder links for the broadcasting-satellite service.

**836**--In Region 2, in the band 11.7-12.2 GHz, transponders on space stations in the fixed-satellite service may be used additionally for transmissions in the broadcasting-satellite service, provided that such transmissions do not have a maximum e.i.r.p. greater than 53 dBW per television channel and do not cause greater interference or require more protection from interference than the coordinated fixed-satellite service frequency assignments. With respect to the space services, this band shall be used principally for the fixed-satellite service. **(Orb-85)**

**837**--*Different category of service*: in Canada, Mexico and the United States, allocation of the band 11.7-12.1 GHz to the fixed service is on a secondary basis (see No. 424). **(Orb-85)**

**838**--In the band 11.7-12.5 GHz in Regions 1 and 3, the fixed, fixed-satellite, mobile, except aeronautical mobile, and broadcasting services, in accordance with their respective allocations, shall not cause harmful interference to broadcasting-satellite stations operating in accordance with the provisions of Appendix 30.

**839**--The use of the band 11.7-12.2 GHz by the fixed-satellite service in Region 2 and 12.2-12.7 GHz by the broadcasting-satellite service in Region 2 is limited to national and sub-regional systems. The use of the band 11.7-12.2 GHz by the fixed-satellite service in Region 2 is subject to previous agreement between the administrations concerned and those having services, operating or planned to operate in accordance with the Table, which may be affected (see Articles 11, 13 and 14). For the use of the band 12.2-12.7 GHz by the broadcasting-satellite service in Region 2, see Article 15. **(Orb-88)**

**842**--*Additional allocation*: the bands 12.1-12.2 GHz in Brazil and Peru, is also allocated to the fixed service on a primary basis. **(Orb-85)**

**844**--In Region 2, in the band 12.2-12.7 GHz, existing and future terrestrial radiocommunication services shall not cause harmful interference to the space services operating in conformity with the Broadcasting-Satellite Plan for Region 2 contained in Appendix 30. **(Orb-85)**

**845**--In Region 3, the band 12.2-12.5 GHz is also allocated to the fixed-satellite (space-to-Earth) service limited to national and sub-regional systems. The power flux-density limits in No. 2574 shall apply to this frequency band. The introduction of the service in relation to the broadcasting-satellite service in Region 1 shall follow the procedures specified in Article 7 of Appendix 30, with the applicable frequency band extended to cover 12.2-12.5 GHz.

**846**--In Region 2, in the band 12.2-12.7 GHz, assignments to stations of the broadcasting-satellite service in the Plan for Region 2 contained in Appendix 30 (Orb-85) may also be used for transmissions in the fixed-satellite service (space-to-Earth), provided that such transmissions do not cause more interference or require more protection from interference than the broadcasting-satellite service transmissions operating in conformity with the Region 2 Plan. With respect to the space services, this band shall be used principally for the broadcasting-satellite service. **(Orb-85)**

**847**--The broadcasting-satellite service in the band 12.5-12.75 GHz in Region 3 is limited to community reception with a power flux-density not exceeding  $-111$  dB(W/m<sup>2</sup>) as defined in Annex 8 of Appendix 30. *See also Resolution 34.* **(Orb-85)**

**848**--*Additional allocation*: in Algeria, Angola, Saudi Arabia, Bahrain, Cameroon, the Central African Republic, the Congo, the Ivory Coast, Egypt, the United Arab Emirates, Ethiopia, Gabon, Ghana, Guinea, Iraq, Israel, Jordan, Kenya, Kuwait, the Lebanon, Libya, Madagascar, Mali, Morocco, Mongolia, Niger, Nigeria,



Qatar, Syria, Senegal, Somalia, Sudan, Chad, Togo, Yemen (P.D.R. of) and Zaire, the band 12.5-12.75 GHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

**849--Additional allocation:** in the Federal Republic of Germany, Belgium, Denmark, Spain, Finland, France, Greece, Liechtenstein, Luxembourg, Monaco, Norway, Uganda, the Netherlands, Portugal, Romania, Sweden, Switzerland, Tanzania, Tunisia and Yugoslavia, the band 12.5-12.75 GHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a secondary basis.

**850--Additional allocation:** in Austria, Bulgaria, Hungary, the German Democratic Republic, Czechoslovakia and the U.S.S.R., the band 12.5-12.75 GHz is also allocated to the fixed service and the mobile, except aeronautical mobile, service on a primary basis. However, stations in these services shall not cause harmful interference to fixed-satellite service earth stations of countries in Region 1 other than those mentioned in this footnote. Coordination of these earth stations is not required with stations of the fixed and mobile services of the countries mentioned in this footnote. The power flux-density limit at the Earth's surface given in No. 2574 for the fixed satellite service shall apply on the territory of the countries mentioned in this footnote. **(WARC-92)**

**851--**The use of the band 13.25-13.4 GHz by the aeronautical radionavigation service is limited to Doppler navigation aids.

**852--**Subject to agreement obtained under the procedure set forth in Article 14, the band 13.25-13.4 GHz may also be used in the space research service (Earth-to-space) on a secondary basis.

**853--Additional allocation:** in Bangladesh, India and Pakistan, the band 13.25-14 GHz is also allocated to the fixed service on a primary basis.

**854--Additional allocation:** in Afghanistan, Algeria, Angola, Saudi Arabia, Bahrain, Brunei Darussalam, Cameroon, the Republic of Korea,

Egypt, the United Arab Emirates, Finland, Gabon, Guinea, Indonesia, Iran, Iraq, Israel, Jordan, Kuwait, the Lebanon, Madagascar, Malaysia, Malawi, Mali, Malta, Morocco, Mauritania, Niger, Nigeria, Pakistan, Qatar, Syria, Senegal, Singapore, Sudan, Sri Lanka, Sweden, Chad, Thailand and Tunisia, the band 13.4-14 GHz is also allocated to the fixed and mobile services on a primary basis. **(WARC-92)**

**855--Additional allocation:** in Austria, Bulgaria, Hungary, Japan, Mongolia, the German Democratic Republic, Romania, the United Kingdom, Czechoslovakia and the U.S.S.R., the band 13.4-14 GHz is also allocated to the radionavigation service on a primary basis. **(WARC-92)**

**855A--**In the band 13.75-14 GHz the e.i.r.p. of any emission from an earth station in the fixed-satellite service shall be at least 68 dBW, and should not exceed 85 dBW, with a minimum antenna diameter of 4.5 meters. In addition the e.i.r.p. averaged over one second, radiated by a station in the radiolocation and radionavigation services towards the geostationary-satellite orbit shall not exceed 59 dBW. These values shall apply subject to review by the CCIR and until they are changed by a future competent world administrative radio conference (see Resolution 112). **(WARC-92)**

**855B--**In the band 13.75-14 GHz geostationary space stations in the space research service, for which information for advance publication has been received by the IFRB prior to 31 January 1992, shall operate on an equal basis with stations in the fixed-satellite service; after that date new geostationary space stations in the space research service will operate on a secondary basis.

Until 1 January 2000, stations in the fixed-satellite service shall not cause harmful interference to non-geostationary space stations in the space research and Earth exploration-satellite services; after that date these non-geostationary space stations will operate on a secondary basis in relation to the fixed-satellite service. **(WARC-92)**

**856--**The use of the band 14-14.3 GHz by the

radionavigation service shall be such as to provide sufficient protection to space stations of the fixed-satellite service (see Recommendation 708). **857--Additional allocation:** in Afghanistan, Algeria, Angola, Saudi Arabia, Australia, Bahrain, Bangladesh, Botswana, Brunei Darussalam, Cameroon, China, the Congo, the Republic of Korea, Egypt, the United Arab Emirates, Gabon, Guatemala, Guinea, India, Indonesia, Iran, Iraq, Israel, Japan, Jordan, Kenya, Kuwait, Lesotho, Lebanon, Malaysia, Malawi, Mali, Morocco, Mauritania, Niger, Oman, Pakistan, the Philippines, Qatar, Democratic People's Republic of Korea, Syria, Senegal, Singapore, Somalia, Sudan, Sri Lanka, Swaziland, Tanzania, Chad, Thailand and Yemen, the band 14-14.3 GHz is also allocated to the fixed service on a primary basis. **(WARC-92)**

**858--**The band 14-14.5 GHz may be used, within the fixed-satellite service (Earth-to-space), for feeder links for the broadcasting-satellite service, subject to coordination with other networks in the fixed-satellite service. Such use of feeder links is reserved for countries outside Europe. **(Orb-88)**

**859--**The band 14-14.5 GHz is also allocated to the land mobile-satellite service (Earth-to-space) on a secondary basis.

**860--Additional allocation:** in the Federal Republic of Germany, Austria, Belgium, Denmark, Spain, Finland, France, Greece, Ireland, Iceland, Italy, Libya, Liechtenstein, Luxembourg, Norway, the Netherlands, Portugal, the United Kingdom, Sweden, Switzerland, Turkey and Yugoslavia, the band 14.25-14.3 GHz is allocated to the fixed service on a primary basis. **(WARC-92)**

**861--Additional allocation:** in Japan, Pakistan, the United Kingdom and Thailand, the band 14.25-14.3 GHz is also allocated to the mobile, except aeronautical mobile, service on a primary basis.

**862--**In making assignments to stations of other services to which the band 14.47-14.5 GHz is allocated, administrations are urged to take all

practicable steps to protect spectral line observations of the radio astronomy service from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).

**863--**The use of the band 14.5-14.8 GHz by the fixed-satellite service (Earth-to-space) is limited to feeder links for the broadcasting-satellite service. This use is reserved for countries outside Europe. **(Orb-88)**

**864--**All emissions in the band 15.35-15.4 GHz are prohibited, except those provided for by No. 865.

**865--Additional allocation:** in Afghanistan, Saudi Arabia, Bahrain, Cameroon, Egypt, the United Arab Emirates, Guinea, Iran, Iraq, Israel, Kuwait, the Lebanon, Libya, Pakistan, Qatar, Syria, Somalia and Yugoslavia, the band 15.35-15.4 GHz is also allocated to the fixed and mobile services on a secondary basis.

**866--Additional allocation:** in Afghanistan, Algeria, Angola, Saudi Arabia, Austria, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, the Congo, Costa Rica, Egypt, El Salvador, the United Arab Emirates, Finland, Guatemala, India, Indonesia, Iran, Jordan, Kuwait, Libya, Malaysia, Malawi, Morocco, Mozambique, Nepal, Nicaragua, Oman, Pakistan, Qatar, Singapore, Somalia, Sudan, Sri Lanka, Sweden, Swaziland, Tanzania, Chad, Thailand, Yemen and Yugoslavia, the band 15.7-17.3 GHz is also allocated to the fixed and mobile services on a primary basis. **(WARC-92)**

**867--Additional allocation:** in Israel, the band 15.7-17.3 GHz is also allocated to the fixed and mobile services on a primary basis. These services shall not claim protection from or cause harmful interference to services operating in accordance with the Table in countries other than those included in No. 866.

**868--Additional allocation:** in Afghanistan, Algeria, the Federal Republic of Germany, Angola, Saudi Arabia, Austria, Bahrain, Bangladesh, Cameroon, Costa Rica, El Salvador, the United Arab Emirates, Finland, Guatemala,

Honduras, India, Indonesia, Islamic Republic of Iran, Iraq, Israel, Japan, Jordan, Kuwait, Libya, Nepal, Nicaragua, Oman, Pakistan, Qatar, Sudan, Sri Lanka, Sweden, Thailand and Yugoslavia, the band 17.3-17.7 GHz is also allocated to the fixed and mobile services on a secondary basis. The power limits given in Nos. 2505 and 2508 shall apply. **(WARC-92)**

**868A**--In the band 17.3-17.8 GHz, sharing between the fixed-satellite service (Earth-to-space) and the broadcasting-satellite service shall also be in accordance with the provisions of section 1 of Annex 4 of Appendix 30A. **(WARC-92)**

**869**--The use of the band 17.3-18.1 GHz by the fixed-satellite service (Earth-to-space) is limited to feeder links for the broadcasting-satellite service. For the use of the band 17.3-17.8 GHz in Region 2 by the feeder links for the broadcasting-satellite service in the band 12.2-12.7 GHz, see Article 15A. **(Orb-85)**

**869A**--In Region 2, the allocation to the broadcasting-satellite service in the band 17.3-17.8 GHz shall come into effect on 1 April 2007. After that date, use of the fixed-satellite (space-to-Earth) service in the band 17.7-17.8 GHz shall not claim protection from and shall not cause harmful interference to operating systems in the broadcasting-satellite service. **(WARC-92)**

**869B**--In Region 2, the allocation of the band 17.7-17.8 GHz to the mobile service is on a primary basis until 31 March 2007. **(WARC-92)**

**870**--The band 18.1-18.3 GHz is also allocated to the meteorological-satellite service (space-to-Earth) on a primary basis. Its use is limited to geostationary satellites and shall be in accordance with the provisions of No. 2578.

**870A**--The use of the band 18.1-18.4 GHz by the fixed-satellite service (Earth-to-space) is limited to feeder links for the broadcasting-satellite service. **(WARC-92)**

**870B**--*Alternative allocation*: in the Federal Republic of Germany, Denmark, the United Arab Emirates, Greece, Poland, the Czech and Slovak Federal Republic and United Kingdom,

the band 18.1-18.4 GHz is allocated to the fixed, fixed-satellite (space-to-Earth) and mobile services on a primary basis. The provisions of No. 870 also apply. **(WARC-92)**

**871**--In making assignments to stations in the fixed and mobile services, administrations are invited to take account of passive sensors in the earth exploration-satellite and space research services operating in the band 18.6-18.8 GHz. In this band, administrations should endeavor to limit as far as possible both the power delivered by the transmitter to the antenna and the e.i.r.p. in order to reduce the risk of interference to passive sensors to the minimum.

**872**--In assigning frequencies to stations in the fixed-satellite service in the direction space-to-Earth, administrations are requested to limit as far as practicable the power flux-density at the Earth's surface in the band 18.6-18.8 GHz, in order to reduce the risk of interference to passive sensors in the earth exploration-satellite and space research services.

**873**--*Additional allocation*: in Afghanistan, Algeria, Angola, Saudi Arabia, Bahrain, Bangladesh, Brazil, Brunei Darussalam, Cameroon, China, the Congo, the Republic of Korea, Costa Rica, Egypt, the United Arab Emirates, Gabon, Guatemala, Guinea, India, Indonesia, Iran, Iraq, Israel, Japan, Jordan, Kenya, Kuwait, the Lebanon, Malaysia, Mali, Morocco, Mauritania, Nepal, Niger, Nigeria, Oman, Pakistan, the Philippines, Qatar, Syria, Singapore, Somalia, Sudan, Sri Lanka, Tanzania, Chad, Thailand, Togo, Tunisia and Zaire, the band 19.7-21.2 GHz is also allocated to the fixed and mobile services on a primary basis. This additional use shall not impose any limitation on the power flux-density of space stations in the fixed-satellite service in the band 19.7-21.2 GHz and of space stations in the mobile-satellite service in the band 19.7-20.2 GHz where such allocation to the mobile-satellite service is on a primary basis in the latter band. **(WARC-92)**

**873A**--In order to facilitate interregional coordination between networks in the mobile-satellite and fixed-satellite services, carriers in

the mobile-satellite service that are most susceptible to interference shall, to the extent practicable, be located in the higher parts of the bands 19.7-20.2 GHz and 29.5-30 GHz.(**WARC-92**)

**873B**--In the band 19.7-20.2 GHz and 29.5-30 GHz in Region 2, and in the bands 20.1-20.2 GHz and 29.9-30 GHz in Regions 1 and 3, networks which are both in the fixed-satellite service and in the mobile-satellite service may include links between earth stations at specified or unspecified points or while in motion, through one or more satellites for point-to-point and point-to-multipoint communications.(**WARC-92**)

**873C**--In the bands 19.7-20.2 GHz and 29.5-30 GHz, the provisions of No. 953 do not apply with respect to the mobile-satellite service.(**WARC-92**)

**873D**--The allocation to the mobile-satellite service is intended for use by networks which use narrow spot-beam antennas and other advanced technology at the space stations. Administrations operating systems in the mobile-satellite service in the band 19.7-20.1 GHz in Region 2 and in the band 20.1-20.2 GHz shall take all practicable steps to ensure the continued availability of these bands for administrations operating fixed and mobile systems in accordance with the provisions of No. 873.(**WARC-92**)

**873E**--The use of the bands 19.7-20.1 GHz and 29.5-29.9 GHz by the mobile-satellite service in Region 2 is limited to satellite networks which are both in the fixed-satellite service and in the mobile-satellite service as described in No. 873B.(**WARC-92**)

**873F**--In Regions 1 and 3, the allocation to the broadcasting-satellite service in the band 21.4-22 GHz shall come into effect on 1 April 2007. The use of this band by the broadcasting-satellite service after that date and on an interim basis prior to that date is subject to the provisions of Resolution 525.(**WARC-92**)

**873G**--Additional allocation: in Japan, the band 21.4-22 GHz is also allocated to the

broadcasting service on a primary basis.(**WARC-92**)

**874**--In making assignments to stations of other services, administrations are urged to take all practicable steps to protect the spectral line observations of the radio astronomy service in the band 22.01-22.21 GHz from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see also Nos. 343 and 344 and Article 36).

**875**--In making assignments to stations of other services, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference in the band 22.21-22.5 GHz. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see also Nos. 343 and 344 and Article 36).

**876**--The use of the band 22.21-22.5 GHz by the earth exploration-satellite (passive) and space research (passive) services shall not impose constraints upon the fixed and mobile, except aeronautical mobile, services.

**879**--In making assignments to stations of other services, administrations are urged to take all practicable steps to protect the spectral line observations of the radio astronomy service in the bands 22.81-22.86 GHz and 23.07-23.12 GHz from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see also Nos. 343 and 344 and Article 36).

**880**--All emissions in the band 23.6-24 GHz are prohibited.

**881**--The band 24-24.25 GHz (center frequency 24.125 GHz) is designated for industrial, scientific and medical (ISM) applications. Radiocommunication services operating within this band must accept harmful interference which may be caused by these applications. ISM equipment operating in this band is subject to the provisions of No. 1815.

**881A**--Use of the 25.25-27.5 GHz band by the

inter-satellite service is limited to space research and Earth exploration-satellite applications, and also transmissions of data originating from industrial and medical activities in space.(**WARC-92**)

**881B**--Space services using non-geostationary satellites operating in the inter-satellite service in the band 27 - 27.5 GHz are exempt from the provisions of No. 2613.(**WARC-92**)

**882**--The band 29.95-30 GHz may be used for space-to-space links in the earth exploration-satellite service for telemetry, tracking, and control purposes, on a secondary basis.

**882A**--*Additional allocation*: the bands 27.500-27.501 GHz and 29.999-30.000 GHz are also allocated to the fixed-satellite service (space-to-Earth) on a primary basis for the beacon transmissions intended for up-link power control. Such space-to-Earth transmissions shall not exceed an equivalent isotropically radiated power (e.i.r.p.) of +10dBW in the direction of adjacent satellites on the geostationary-satellite orbit. In the band 27.500-27.501 GHz, such space-to-Earth transmissions shall not produce a power flux-density in excess of the values specified in No. 2578 on the Earth's surface. (**WARC-92**)

**882B**--*Additional allocation*: the band 27.501-29.999 GHz is also allocated to the fixed-satellite service (space-to-Earth) on a secondary basis for beacon transmissions intended for up link power control.(**WARC-92**)

**882C**--In the band 28.5-30 GHz, the Earth exploration-satellite service is limited to the transfer of data between stations and not to the primary collection of information by means of active or passive sensors.(**WARC-92**)

**882D**--The band 27.5-30 GHz may be used by the fixed-satellite service (Earth-to-space) for the provision of feeder links for the broadcasting-satellite service.(**WARC-92**)

**882E**--The inter-satellite service shall not claim protection from harmful interference from airport surface detection equipment stations of the radionavigation service.(**WARC-92**)

**882F**--*Additional allocation*: in Japan, the band

24.65-25.25 GHz is also allocated to the radio-navigation service on a primary basis until 2008.(**WARC-92**)

**882G**--In the band 24.75-25.25 GHz, feeder links to stations of the broadcasting-satellite service shall have priority over other uses in the fixed-satellite service (Earth-to-space). Such other uses shall protect and shall not claim protection from existing and future operating feeder link networks to such broadcasting-satellite stations.(**WARC-92**)

**883**--*Additional allocation*: in Afghanistan, Algeria, Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, China, the Congo, the Republic of Korea, Egypt, the United Arab Emirates, Ethiopia, Guinea, India, Indonesia, Iran, Iraq, Israel, Japan, Jordan, Kenya, Kuwait, the Lebanon, Malaysia, Mali, Morocco, Mauritania, Nepal, Niger, Pakistan, Qatar, Syria, Singapore, Somalia, Sudan, Sri Lanka, Chad and Thailand, the band 29.5-31 GHz is also allocated to the fixed and mobile services on a secondary basis. The power limits specified in Nos. 2505 and 2508 shall apply. (**WARC-92**)

**884**--In the band 31-31.3 GHz the power flux-density limits specified in No. 2582 shall apply to the space research service.(**Orb-88**)

**885**--*Different category of service*: in Bulgaria, Cuba, Mongolia, Poland, the German Democratic Republic, Czechoslovakia and the U.S.S.R., the allocation of the band 31-31.3 GHz to the space research service is on a primary basis (see No. 425). (**WARC-92**)

**886**--In making assignments to stations of other services, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference in the band 31.2-31.3 GHz. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).

**887**--All emissions in the band 31.3-31.5 GHz are prohibited.

**888**--In Regions 1 and 3, in making assignments to stations of other services to which the band

31.5-31.8 GHz is allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).

In Region 2, all emissions in the band 31.5-31.8 GHz are prohibited.

**889--*Different category of service:*** in Bulgaria, Egypt, Mongolia, Poland, the German Democratic Republic, Romania, Czechoslovakia and the U.S.S.R., the allocation of the band 31.5-31.8 GHz to the fixed and mobile, except aeronautical mobile, services is on a primary basis (see No. 425). **(WARC-92)**

**892--**Subject to agreement obtained under the procedure set forth in Article 14, the band 31.8-33.8 GHz may also be used in Japan for space-to-Earth transmissions in the fixed-satellite service up to 31 December 1990.

**893--**In designing systems for the inter-satellite and radionavigation services in the band 32-33 GHz, and for the space research service (deep space) in the band 31.8-32.3 GHz, administrations shall take all necessary measures to prevent harmful interference between these services, bearing in mind the safety aspects of the radionavigation service (see Recommendation 707) **(WARC-79).****(WARC-92)**

**894--*Additional allocation:*** in Afghanistan, Saudi Arabia, Bahrain, Bangladesh, Egypt, the United Arab Emirates, Spain, Finland, Gabon, Guinea, Indonesia, Iran, Iraq, Israel, Jordan, Kenya, Kuwait, the Lebanon, Libya, Malaysia, Malawi, Mali, Malta, Morocco, Mauritania, Nepal, Niger, Nigeria, Oman, Pakistan, the Philippines, Qatar, Syria, Senegal, Singapore, Somalia, Sudan, Sri Lanka, Sweden, Tanzania, Thailand, Togo, Tunisia, Yemen A.R. and Zaire, the band 33.4-36 GHz is also allocated to the fixed and mobile services on a primary basis.**(WARC-92)**

**896--*Different category of service:*** in Bulgaria, Cuba, Mongolia, the German Democratic Republic, Czechoslovakia and the U.S.S.R., the

allocation of the band 34.7-35.2 GHz to the space research service is on a primary basis (see No. 425). **(WARC-92)**

**897--**Radars located on spacecraft may be operated on a primary basis in the band 35.5-35.6 GHz.

**898--**In making assignments to stations of other services, administrations are urged to take all practicable steps to protect the spectral line observations of the radio astronomy service in the band 36.43-36.5 GHz from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).

**900--**In making assignments to stations of other services to which the band 42.5-43.5 GHz is allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference, especially in the bands 42.77-42.87 GHz, 43.07-43.17 GHz, and 43.37-43.47 GHz, which are used for spectral line observations of silicon monoxide. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).

**901--**The allocation of the spectrum for the fixed-satellite service in the bands 42.5-43.5 GHz and 47.2-50.2 GHz for Earth-to-space transmission is greater than that in the band 37.5-39.5 GHz for space-to-Earth transmission in order to accommodate feeder links to broadcasting satellites. Administrations are urged to take all practicable steps to reserve the band 47.2-49.2 GHz for feeder links for the broadcasting-satellite service operating in the band 40.5-42.5 GHz.

**902--**In the bands 43.5-47 GHz, 66-71 GHz, 95-100 GHz, 134-142 GHz, 190-200 GHz and 252-265 GHz, stations in the land mobile service may be operated subject to not causing harmful interference to the space radiocommunication services to which these bands are allocated (see No. 435).

**903--**In the bands 43.5-47 GHz, 66-71 GHz, 95-

100 GHz, 134-142 GHz, 190-200 GHz and 252-265 GHz, satellite links connecting land stations at specified fixed points are also authorized when used in conjunction with the mobile-satellite service or the radionavigation-satellite service.

**904**--The bands 48.94-49.04 GHz and 97.88-98.08 GHz are also allocated to the radio astronomy service on a primary basis for spectral line observations. In making assignments to stations of other services to which these bands are allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from space or air-borne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).

**905**--In the band 48.94-49.04 GHz, all emissions from airborne stations are prohibited.

**906**--In the bands 51.4-54.25 GHz, 58.2-59 GHz, 64-65 GHz and 72.77-72.91 GHz, radio astronomy observations may be carried out under national arrangements. Administrations are urged to take all practicable steps to protect radio astronomy observations in these bands from harmful interference.

**907**--In the bands 51.4-54.25 GHz, 58.2-59 GHz, 64-65 GHz, 86-92 GHz, 105-116 GHz and 217-231 GHz, all emission are prohibited.

**908**--*Additional allocation*: in the Federal Republic of Germany, Japan and the United Kingdom, the band 54.25-58.2 GHz is also allocated to the radiolocation service on a primary basis.

**909**--In the bands 54.25-58.2 GHz, 59-64 GHz, 116-134 GHz, 170-182 GHz and 185-190 GHz, stations in the aeronautical mobile service may be operated subject to not causing harmful interference to the inter-satellite service (see No. 435).

**910**--In the bands 59-64 GHz and 126-134 GHz, airborne radars in the radiolocation service may be operated subject to not causing harmful interference to the inter-satellite service (see No. 435).

**911**--The band 61-61.5 GHz (center frequency

61.25 GHz) is designated for industrial, scientific and medical (ISM) applications. The use of this frequency band for ISM applications shall be subject to special authorization by the administration concerned in agreement with other administrations whose radiocommunication services might be affected. In applying this provision administrations shall have due regard to the latest relevant CCIR Recommendations.

**912**--In the band 78-79 GHz radars located on space stations may be operated on a primary basis in the Earth exploration-satellite service and in the space research service.

**913**--In the band 84-86 GHz, stations in the fixed, mobile and broadcasting services shall not cause harmful interference to broadcasting-satellite stations operating in accordance with the decisions of the appropriate frequency assignment planning conference for the broadcasting-satellite service.

**914**--The band 93.07-93.27 GHz is also used by the radio astronomy service for spectral line observations. In making assignments to stations of the services to which this band is allocated, administrations are urged to take all practicable steps to protect radio astronomy observations from harmful interference. Emissions from space or air-borne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).

**915**--The band 119.98-120.02 GHz is also allocated to the amateur service on a secondary basis.

**916**--The band 122-123 GHz (center frequency 122.5 GHz) is designated for industrial, scientific and medical (ISM) applications. The use of this frequency band for ISM applications shall be subject to special authorization by the administration concerned in agreement with other administrations whose radiocommunication services might be affected. In applying this provision administrations shall have due regard to the latest relevant CCIR Recommendations.

**917**--In the band 140.69-140.98 GHz all emissions from airborne stations, and from space sta-

tions in the space-to-Earth direction, are prohibited.

**918**--The bands 140.69-140.98 GHz, 144.68-144.98 GHz, 145.45-145.75 GHz and 146.82-147.12 GHz are also allocated to the radio astronomy service on a primary basis for spectral line observations. In making assignments to stations of other services to which the bands are allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).

**919**--The bands 150-151 GHz, 174.42-175.02 GHz, 177-177.4 GHz, 178.2-178.6 GHz, 181-181.46 GHz and 186.2-186.6 GHz are also allocated to the radio astronomy service on a secondary basis for spectral line observations. In making assignments to stations of other services to which these bands are allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).

**920**--*Additional allocation*: in the United Kingdom, the band 182-185 GHz is also allocated to the fixed and mobile services on a primary basis.

**921**--In the band 182-185 GHz all emissions are prohibited except for those under the provisions of No. 920.

**922**--The band 244-246 GHz (center frequency 245 GHz) is designated for industrial, scientific and medical (ISM) applications. The use of this frequency band for ISM applications shall be subject to special authorization by the administration concerned in agreement with other administrations whose radiocommunication services might be affected. In applying this provision administrations shall have due regard to the latest relevant CCIR Recommendations.

**923**--The bands 250-251 GHz and 262.24-262.76 GHz are also allocated to the radio astronomy service on a primary basis for spectral line observations. In making assignments to stations of other services to which these bands are allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).

**924**--The band 257.5-258 GHz is also allocated to the radio astronomy service on a secondary basis for spectral line observations. In making assignments to stations of other services to which the band is allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).

**925**--In the Federal Republic of Germany, Argentina, Spain, Finland, France, India, Italy, the Netherlands and Sweden, the band 261-265 GHz is also allocated to the radio astronomy service on a primary basis. In making assignments to stations of other services to which the band is allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).

**926**--In making assignments to stations of other services to which the band 265-275 GHz is allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference, especially in the bands 265.64-266.16 GHz, 267.34-267.86 GHz and 271.74-272.26 GHz, which are used for spectral line observations. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy



service (see Nos. 343 and 344 and Article 36).  
**927**--The frequency band 275-400 GHz may be used by administrations for experimentation with, and development of, various active and passive services. In this band a need has been identified for the following spectral line measurements for passive services:

*radio astronomy service:*

278-280 GHz and 343-348 GHz:

*space research service (passive) and earth exploration-satellite service (passive):*

275-277 GHz, 300-302 GHz, 324-326 GHz, 345-347 GHz, 363-365 GHz and 379-381 GHz.

Future research in this largely unexplored spectral region may yield additional spectral lines and continuum bands of interest to the passive services. Administrations are urged to take all practicable steps to protect these passive services from harmful interference until the next competent world administrative radio conference.

**928 to 952**--NOT allocated.

### Non-Government (NG) Footnotes

**NG2**--Facsimile broadcasting stations may be authorized in the band 88-108 MHz.

**NG3**--Control stations in the domestic public radio services may be authorized frequencies in the band 72-73 and 75.4-76 MHz on the condition that harmful interference will not be caused to operational fixed stations.

**NG4**--The use of the frequencies in the band 152.84-153.38 MHz may be authorized in any area to remote pickup broadcast base and mobile stations on the condition that harmful interference will not be caused to stations, operating in accordance with the Table of Frequency Allocations.

**NG6**--Stations in the public safety radio services authorized as of June 30, 1958, to use frequencies in the band 159.51-161.79 MHz in areas other than Puerto Rico and the Virgin Islands may continue such operation, including expansion of existing systems, on the condition

that harmful interference will not be caused to stations in the services to which these bands are allocated. In Puerto Rico and the Virgin Islands this authority is limited to frequencies in the band 160.05-161.37 MHz. No new public radio service system will be authorized to operate on these frequencies.

**NG12**--Frequencies in the bands 454.50-455 MHz and 459.40-460 MHz may be assigned to domestic public land and mobile stations to provide a two-way air-ground public radio-telephone service.

**NG17**--Stations in the Land Transportation Radio Services authorized as of May 15, 1958 to operate on the frequency 161.61 MHz may, upon proper application, continue to be authorized for such operations, including expansion of existing systems, on the condition that harmful interference will not be caused to the operation of any authorized station in the maritime mobile service. No new Land Transportation Radio Service system will be authorized to operate on 161.61 MHz.

**NG19**--Fixed stations associated with the maritime mobile service may be authorized, for purposes of communication with coast stations, to use frequencies assignable to ship stations in this band, on the condition that harmful interference will not be caused to services operating in accordance with the Table of Frequency Allocations.

**NG23**--Frequencies in the band 2100-2200 MHz may also be assigned to stations in the international fixed public radio service located south of 25°30' north latitude in the State of Florida and in U.S. Possessions in the Caribbean area, provided, however, no new assignments in the band 2150-2162 MHz will be made to such stations after February 25, 1974.

**NG28**--The frequency band 160.86-161.40 MHz is available for assignment to remote pick-up base and remote pickup mobile stations in Puerto Rico and the Virgin Islands only on a shared basis with the land transportation radio service.

**NG30**--Stations in the international fixed public

radiocommunication service in Florida, south of 25°30' north latitude, may be authorized to use frequencies in the band 716-890 MHz on the condition that harmful interference will not be caused to the broadcasting service of any country. This is an interim allocation the termination of which will later be specified by the Commission when it is determined that equipments are generally available for use in bands allocated internationally to the fixed services.

**NG41**--Frequencies in the bands 3700-4200 MHz, 5925-6425 MHz, and 10.7-11.7 GHz may also be assigned to stations in the international fixed public and international control services located in the U.S. Possessions in the Caribbean area.

**NG42**--Non-Government stations in the radiolocation service shall not cause harmful interference to the amateur service.

**NG43**--Fixed stations in the domestic public radio services in Alaska, south of 56° north latitude and east of 134° west longitude, may be authorized to use frequencies in the band 800-830 MHz, on the condition that harmful interference will not be caused to the broadcasting service of any country.

**NG47**--In the band 2500-2690 MHz, channels in 2500-2686 MHz and the corresponding response frequencies 2686.0625-2689.8125 MHz may be assigned to stations in the Instructional Television Fixed Service (Part 74 of this Chapter) CFR 47; channels in 2596-2644 MHz and response frequencies 2686.5625-2689.6875 MHz may be assigned to Multipoint Distribution Service stations (Part 21 of this Chapter); and channels 2650-2656 MHz, 2662-2668 MHz and 2674-2680 MHz and response frequencies 2686.9375 MHz, 2687.9375 MHz and 2688.9375 MHz may be assigned to stations in the Operational Fixed Service (Part 94 of this Chapter). In Alaska, however, frequencies within the band 2655-2690 MHz are not available for assignment to terrestrial stations.

**NG49**--The following frequencies may be authorized on a secondary basis for low-power

(1 watt input) mobile operations in the Manufacturers Radio Service subject to the condition that no interference is caused to the reception of television stations operating on channels 4 and 5 and that their use is limited to a manufacturing facility:

	MHz	MHz	MHz	MHz
MHz	72.02	72.10	72.18	72.26
72.34	72.04	72.12	72.20	72.28
72.36	72.06	72.14	72.22	72.30
72.38	72.08	72.16	72.24	72.32
72.40				

Further, the following frequencies may be authorized on a primary basis for mobile operations in the Special Industrial Radio Service, Manufacturers Radio Service, and Railroad Radio Service subject to the condition that no interference is caused to the reception of television stations operating on channels 4 and 5; and that their use is limited to a railroad yard, manufacturing plant, or similar industrial facility.

	MHz	MHz	MHz	MHz
MHz	72.44	72.52	72.60	75.48
75.56	72.48	72.56	75.44	75.52
75.60				

**NG51**--In Puerto Rico and the Virgin Islands only, the bands 150.8-150.98 MHz and 150.98-151.49 MHz are allocated exclusively to the business radio service.

**NG53**--In the band 12.7-13.15 GHz, television pickup stations and CARS pickup stations shall be assigned channels on a co-equal basis and shall operate on a secondary basis to fixed stations operating in accordance with the Table of Frequency Allocations. In the 13.15-13.20 GHz band television pickup stations and CARS pickup stations shall be assigned on an exclusive basis in the top one hundred markets, as set out in Section 76.51.

**NG56**--In the bands 72.0-73.0 and 75.4-76.0

MHz, the use of mobile radio remote control of models is on a secondary basis to all other fixed and mobile operations. Such operations are subject to the condition that interference will not be caused to common carrier domestic public stations, to remote control of industrial equipment operating in the 72-76 MHz band, or to the reception of television signal on channels 4 (66-72 MHz) or 5 (76-82 MHz). Television interference shall be considered to occur whenever reception of regularly used television signals is impaired or destroyed, regardless of the strength of the television signal or the distance to the television station.

**NG59**--The frequencies 37.60 and 37.85 MHz may be authorized only for use by base, mobile, and operational fixed stations participating in an interconnected or coordinated power service utility system.

**NG63**--Television Broadcast translator stations holding valid licenses on November 15, 1971, to operate in the frequency band 806-890 MHz (channels 70-83), may continue to operate in this band, pursuant to periodic license renewals, on a secondary basis to the land mobile radio service.

**NG64**--Broadcast auxiliary stations licensed as of July 10, 1970, to operate in the frequency band 942-947 MHz may continue to so operate pending a decision as to their disposition through a future rule making proceeding.

**NG66**--The frequency band 470-512 MHz is allocated for use in the Broadcasting and Land Mobile Radio Services. In the Land Mobile Services it is available for assignment in the Domestic Public, Public Safety, Industrial, and Land Transportation Radio Services at, or in the vicinity of 13 urbanized areas of the United States, as set forth in the table below, and subject to the standards and conditions set forth in Parts 22 and 90 of this chapter, CFR 47.

Urbanized area	TV channel
New York-Northeastern New Jersey	14, 15
Los Angeles	14, 20
Chicago-Northwestern Indiana	14, 15
Philadelphia, Pa.-New Jersey	19, 20
Detroit, Mich	15, 16
San Francisco-Oakland, Cal	16, 17

Boston, Mass	14, 16
Washington, D.C.-Maryland-Virginia	17, 18
Pittsburgh, Pa	14, 18
Cleveland, Ohio	14, 15
Miami, Fla	14
Houston, Tex	17
Dallas, Tex	16

**NG70**--In Puerto Rico and the Virgin Islands only, the bands 159.240-159.435 and 160.410-160.620 MHz are also available for assignment to base stations and mobile stations in the Special Industrial Radio Service.

**NG101**--The use of the band 2500-2690 MHz by the broadcasting-satellite service is limited to domestic and regional systems for community reception of educational television programming and public service information. Such use is subject to agreement among administrations concerned and those having services operating in accordance with the table, which may be affected. Unless such agreement includes the use of higher values, the power flux-density at the earth's surface produced by emissions from a space station in this service shall not exceed those values set forth in Part 73 of the rules for this frequency band.

**NG102**--The frequency bands 2500-2655 MHz (space-to-Earth) and 2655-2690 MHz (Earth-to-space) are allocated for use in the fixed-satellite service as follows:

(a) For common carrier use in Alaska, for intra-Alaska service only, and, in the mid and western Pacific area including American Samoa, the Trust Territory of the Pacific Islands, Guam and Hawaii;

(b) For educational use in the contiguous United States, Alaska, and the mid and western Pacific area including American Samoa, the Trust Territory of the Pacific Islands, Guam and Hawaii.

Such use is subject to agreement with administrations having services operating in accordance with the table, which may be affected. In the band 2500-2655 MHz unless such agreement includes the use of higher values, the power flux density at the earth's surface produced by emissions from a space station in this service shall not exceed the values set forth in

Part 25 of the rules for this frequency band.

**NG104**--The use of the band 10.7-11.7 GHz and 12.75-13.25 GHz in the fixed-satellite service is limited to international systems, i.e., other than domestic systems.

**NG111**--The band 157.4375-157.4625 MHz may be used for one-way paging operations in the Special Emergency Radio Service.

**NG112**--The frequencies 25.04, 25.08, 150.980, 154.585, 158.445, 159.480, 454.000 and 459.000 MHz may be authorized to stations in the Petroleum Radio Service for use primarily in oil spill containment and cleanup operations and secondarily in regular land mobile communication.

**NG114**--In the offshore Louisiana gulf coast area, the band 488-494 MHz (TV Channel 17) is allocated to the domestic public and industrial radio services in accordance with the regulation set forth in Parts 22 and 90, respectively.

**NG115**--In the 174 to 216 MHz band wireless microphones may be authorized to operate on a secondary, non-interfering basis, subject to terms and conditions set forth in Part 74 of these Rules and Regulations.

**NG117**--The frequency 156.050 and 156.175 MHz may be assigned to stations in the maritime mobile service for commercial and port operations in the New Orleans Vessel Traffic Service (VTS) area and the frequency 156.250 MHz may be assigned to stations in the maritime mobile service for port operations in the New Orleans and Houston VTS areas.

**NG118**--Television translator relay stations may be authorized to use frequencies in this band on a secondary basis to stations operating in accordance with the Table of Frequency Allocations.

**NG120**--Frequencies in the 928-960 MHz band may be assigned for multiple address systems and mobile operations on a primary basis as specified in Part 94.

**NG122**--Television Pickup stations may be authorized under Part 74 in the 6425-6525 MHz band on a secondary basis to stations operating in accordance with the Table of Frequency Allocations.

**NG124**--In the Public Safety Radio Service allocation within the bands 30-50 MHz, 150-174 MHz and 450-470 MHz, Police Radio Service licensees are authorized to operate low powered radio transmitters on a secondary non-interference basis in accordance with the provisions of Section 2.803 and 90.19 (f) (5) of the Rules.

**NG127**--In Hawaii the frequency band 488-494 MHz is allocated exclusively to the fixed service for use by common carrier control and repeater stations for point-to-point inter-island communications only.

**NG128**--In the band 535-1605 kHz, AM broadcast licensees or permittees may use their AM carrier on a secondary basis to transmit signals intended for both broadcast and non-broadcast purposes. In the band 88-108 MHz, FM broadcast licensees or permittees are permitted to use subcarriers on a secondary basis to transmit signals intended for both broadcast and non-broadcast purposes. In the bands 54-72, 76-88, 174-216 and 740-890 MHz, TV broadcast licensees or permittees are permitted to use subcarriers on a secondary basis for both broadcast and non-broadcast purposes.

**NG129**--In Alaska, the bands 76-88 MHz and 88-100 MHz are also allocated to the Fixed service on a secondary basis. Broadcast stations operating in these bands shall not cause interference to non-Government fixed operations authorized prior to January 1, 1982.

**NG134**--In the band 10.45-10.5 GHz non-Government stations in the radiolocation service shall not cause harmful interference to the amateur and amateur-satellite services.

**NG135**--In the 420-430 MHz band the Amateur service is not allocated north of line A. (def. § 2.1).

**NG139**--Pending adopting of further specific rules concerning usage of the band 12.2-12.7 GHz by the fixed and broadcasting-satellite services, systems in these services may be authorized subject to the condition that adjustments in certain system design or technical parameters may become necessary during the

system lifetime. The necessity for such adjustments, and their extent, will be dependent upon the Final Acts of the 1983 Regional Administrative Radio Conference and subsequent Commission decisions.

**NG140**--Pending adopting of further specific rules concerning usage of the band 17.3-17.8 GHz by the fixed-satellite service for the purpose of providing feeder links to the broadcasting-satellite service, systems may be authorized for this purpose subject to the condition that adjustments in certain system design or technical parameters may become necessary during the system life-time. The necessity for such adjustments, and their extent, will be dependent upon the Final Acts of the 1983 Regional Administrative Radio Conference and subsequent Commission decisions.

**NG141**--The frequencies 42.40 MHz and 44.10 MHz are authorized on a primary basis in the State of Alaska for meteor burst communications by fixed stations in the Rural Radio Service operating under the provisions of Part 22 of this Chapter. The frequencies 44.20 MHz and 45.90 MHz are authorized on a primary basis in Alaska for meteor burst communications by fixed private radio stations operating under the provisions of Part 90 of this Chapter. The private radio station frequencies may be used by Common Carrier stations on a secondary, noninterference basis and the Common Carrier frequencies may be used by private radio stations for meteor-burst communications on a secondary, non-interference basis. Users shall cooperate to the extent practical to minimize potential interference. Stations utilizing meteor-burst communications shall not cause harmful interference to stations of other radio services operating in accordance with the allocation table.

**NG143**--In the band 11.7-12.2 GHz protection from harmful interference shall be afforded to transmissions from space stations not in conformance with international footnote 839 only if the operations of such space stations impose no unacceptable constraints on operations or orbit

locations of space stations in conformance with 839.

**NG144**--Stations authorized as of September 9, 1983, to use frequencies in the band 17.7-19.7 GHz may, upon proper application, continue to be authorized for such operation.

**NG145**--In the band 11.7-12.2 GHz, transponders on space stations in the fixed-satellite service may be used additionally for transmissions in the broadcasting-satellite service, provided that such transmissions do not have a maximum e.i.r.p. greater than 53 dBw per television channel and do not cause greater interference or require more protection from interference than the coordinated fixed-satellite service frequency assignments. With respect to the space services, this band shall be used principally for the fixed-satellite service.

**NG147**--Stations in the broadcast auxiliary service and private radio services licensed as of July 25, 1985, or on a subsequent date following as a result of submitting an application for license on or before July 25, 1985, may continue to operate on a primary basis with the mobile-satellite service and the radio-determination satellite service.

**NG148**--The frequencies 154.585 MHz, 159.480 MHz, 160.725 MHz, 160.785 MHz, 454.000 MHz and 459.000 MHz may be authorized to maritime mobile stations for offshore radio-location and associated telecommand operations.

**NG149**--The frequency bands 54-72 MHz, 76-88MHz, 174-216 MHz, 470-512 MHz, 512-608 MHz, and 614-806 MHz are also allocated to the fixed service to permit subscription television operations in accordance with Part 73 of the rules.

**NG151**--In the frequency bands 824-849 MHz and 869-894 MHz, cellular land mobile licensees are permitted to offer auxiliary service on a secondary basis subject to the provisions of Part 22.

**NG152**--The band 219-220 MHz is also allocated to the amateur service on a secondary basis for stations participating, as forwarding

stations, in point-to-point fixed digital message forwarding systems, including intercity packet backbone networks.

**NG153**--The 2110-2150 MHz and 2160-2200 MHz bands are reserved for future emerging technologies on a co-primary basis with the fixed and mobile services. Allocations to specific services will be made in future proceedings.

**NG154**--The 157.1875-157.45 MHz and 161.775-162.0125 MHz bands are also allocated to the land mobile service for assignment to stations as described in Part 90.